

AD-A193 847

ARI Research Note 88-33

①
DTIC FILE COPY

ASSESSMENT OF TRAINING NEEDS OF THE U.S. ARMY RESERVE AND NATIONAL GUARD OF IDAHO

Myron P. Viner, Heber G. Moore, Mark E. Eisley (Allen Corporation of America)
and
Roland J. Hart (Training Development and Analysis Directorate)

for

Contracting Officer's Representative
Joseph D. Hagman

ARI Scientific Coordination Office at Boise
Ruth H. Phelps, Chief

TRAINING RESEARCH LABORATORY
Jack H. Hiller, Director

DTIC
EFFECTED
JUN 03 1988
S H D



U. S. Army

Research Institute for the Behavioral and Social Sciences

April 1988

Approved for public release; distribution unlimited.

88 1 027

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER ARI Research Note 88-33	2. GOVT ACCESSION NO. --	3. RECIPIENT'S CATALOG NUMBER --
4. TITLE (and Subtitle) An Assessment of Training Needs of the U.S. Army Reserve and National Guard in Idaho		5. TYPE OF REPORT & PERIOD COVERED Final Report November 86 - March 88
7. AUTHOR(s) Myron P. Viner, Heber G. Moore, Mark E. Eisley (Allen Corporation of America) and Roland G. Hart (Training Development and Analysis Directorate)		6. PERFORMING ORG. REPORT NUMBER --
9. PERFORMING ORGANIZATION NAME AND ADDRESS Allen Corporation of America 209 Madison Street Alexandria, VA 22314		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 20263743A794
11. CONTROLLING OFFICE NAME AND ADDRESS ARI Scientific Coordination Office at Boise Building 304, Gowen Field Boise, Idaho 83707-0045		12. REPORT DATE April 1988
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) U.S. Army Research Institute for the Behavioral and Social Sciences, 5001 Eisenhower Avenue, Alexandria, VA 22333-5600		13. NUMBER OF PAGES 142
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		15. SECURITY CLASS. (of this report) Unclassified
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) --		
18. SUPPLEMENTARY NOTES Joseph D. Hagman, contracting officer's representative Office of Personnel Management, Workforce Effectiveness and Development, P.O. Box 7230, Washington, DC 20044 was the funding organization for this project.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Reserve Component Training Army Reserve Training Inactive Duty Training Front-End Analysis National Guard Training		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This research note identifies the training needs of the Idaho National Guard and Idaho Reserve units (the Reserve Component - RC), and recommends potential solutions to the problems discussed. Needs were identified through a written survey administered to Idaho RC soldiers, and through observing soldier performance during Active and Inactive Duty Training. Recommended solutions were derived from information obtained in follow-up interviews conducted with junior enlisted soldiers, noncommissioned officers, and officers.		

U. S. ARMY RESEARCH INSTITUTE
FOR THE BEHAVIORAL AND SOCIAL SCIENCES

A Field Operating Agency under the Jurisdiction of the
Deputy Chief of Staff for Personnel

EDGAR M. JOHNSON
Technical Director

WM. DARRYL HENDERSON
COL, IN
Commanding

Research accomplished under contract
for the Department of the Army

Allen Corporation of America

Technical review by

Richard P. Kern
Rebecca Pliske

This report, as submitted by the contractor, has been cleared for release to Defense Technical Information Center (DTIC) to comply with regulatory requirements. It has been given no primary distribution other than to DTIC and will be available only through DTIC or other reference services such as the National Technical Information Service (NTIS). The views, opinions, and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other official documentation.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER ARI Research Note 88-33	2. GOVT ACCESSION NO. --	3. RECIPIENT'S CATALOG NUMBER --
4. TITLE (and Subtitle) An Assessment of Training Needs of the U.S. Army Reserve and National Guard in Idaho		5. TYPE OF REPORT & PERIOD COVERED Final Report November 86 - March 88
		6. PERFORMING ORG. REPORT NUMBER --
7. AUTHOR(s) Myron P. Viner, Heber G. Moore, Mark E. Eisley (Allen Corporation of America) and Roland G. Hart (Training Development and Analysis Directorate)		8. CONTRACT OR GRANT NUMBER(s) OPM #85-73. Work Order no. 375-002
9. PERFORMING ORGANIZATION NAME AND ADDRESS Allen Corporation of America 209 Madison Street Alexandria, VA 22314		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 2Q263743A794
11. CONTROLLING OFFICE NAME AND ADDRESS ARI Scientific Coordination Office at Boise Building 304, Gowen Field Boise, Idaho 83707-0045		12. REPORT DATE April 1988
		13. NUMBER OF PAGES 142
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) U.S. Army Research Institute for the Behavioral and Social Sciences, 5001 Eisenhower Avenue, Alexandria, VA 22333-5600		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE --
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) --		
18. SUPPLEMENTARY NOTES Joseph D. Hagman, contracting officer's representative Office of Personnel Management, Workforce Effectiveness and Development, P.O. Box 7230, Washington, DC 20044 was the funding organization for this project.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Reserve Component Training, Army Reserve Training, Inactive Duty Training Front-End Analysis, National Guard Training		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) > This research note identifies the training needs of the Idaho National Guard and Idaho Reserve units (the Reserve Component - RC), and recommends potential solutions to the problems discussed. Needs were identified through a written survey administered to Idaho RC soldiers, and through observing soldier performance during Active and Inactive Duty Training. Recommended solutions were derived from information obtained in follow-up interviews conducted with junior enlisted soldiers, noncommissioned officers, and officers.		

AN ASSESSMENT OF THE TRAINING NEEDS OF THE US ARMY RESERVE
AND THE NATIONAL GUARD IN IDAHO

CONTENTS

	Page
EXECUTIVE SUMMARY	vii
INTRODUCTION	1
METHOD	1
Overview	1
Survey Procedures	2
Information Collection	2
Survey Development	3
Survey Administration	3
Survey Population	4
Data Analysis	4
Interview Procedures	4
Purpose	4
Procedure	4
Enlisted Personnel Interviews	5
Senior Leadership Interviews	5
Observation Procedures	5
PERSONNEL FACTORS AFFECTING TRAINING	5
Personnel Turbulence	5
Overview	5
Personnel Turbulence as a Cause of	
Personnel Problems	6
Training Problems as a Cause of Turbulence	6
Soldier Motivation	8
Motivation as a Cause of Performance Problems	8
Rewards and Promotions	8
TRAINING MANAGEMENT IN UNITS	17
General Problem: Wasted Training Time	17
Specific Problem: Poor Training Planning	17
Training Rationale: The "Why" Question	17
Training Echelon: Who is to be Trained?	19
Problem: Progressive training	19
Administrative solution	19
Training Content: What is to be Trained?	19
Training priorities	20
Training reference material	20



CONTENTS (Continued)

	Page
Training Scheduling: When, Where is Training Conducted?	20
Problem: Dedicated training time for NCOs.	20
Solution: Scheduling flexibility	21
Problem: Infrequent "hip-pocket" training	21
Solution: "Hip-pocket" training aids	22
Problem: Scheduling non-training tasks	22
Solution: Administrative drill	22
Solution: Relational Data Base Management System (RDBMS) for paperwork reduction	22
Using Technology for Training Planning	23
 ACQUIRING AND MAINTAINING INDIVIDUAL SKILLS	 24
Problem: Limited Individual Skill Training Time	24
Solution: Home-Based Training Strategy	26
Problem: Limited MOS Reclassification Strategies.	26
Background.	26
Reclassification Training Limited to Schools.	28
Causes of Limited Strategies	30
SOJT Limited.	30
School Limited.	31
Solution: Flexible MOS Reclassification Strategy.	31
Performance Based Standards	31
Technology Based Strategy	33
Home based training	33
Training Center/Armory based training	34
Problem: Individual Skill Sustainment in the Unit	40
Causes of Sustainment Problems	40
Solution: Additional Study in the Home and/or Training Center/Armory	42
Problem: Standardization and Stabilization of MOS Tasks	42
 IMPLEMENTATION OF COLLECTIVE TRAINING	 43
Tank Gunnery	44
Problem Definition.	44
Causes.	44
Solution: Gunnery Simulation Devices	46
Laser Target Interface Device (LTID)	46
Scale Force Model Tanks	48
Guard Unit Armory Device, Full Crew Interactive Simulation Trainer (GUARDFIST)	48

CONTENTS (Continued)

	Page
Related Armor Problems	48
Indirect Fire	48
TOW Trainer	49
Realistic Tactical Training.	49
Problem: Use of MILES.	49
Causes.	49
Additional MILES Problems	50
Administrative Solution: A Training Committee.	50
Technology Solutions.	51
Job aids	51
Combined Arms Training Facility (CATF)	52
Training strategy to prepare for CATF	52
REFERENCES.	54
APPENDIX A. BACKGROUND INFORMATION FOR RC TRAINING	56
Overview of the RC Training Environment.	57
Reserve Component Training Constraints	60
B. AN OUTLINE OF PROBLEMS, CAUSES, SOLUTIONS	61
C. IDAHO SURVEY RESPONSES	69
D. OFFICER DSSI AND ENLISTED MOS QUALIFICATION (IDAHO RC)	96
E. SENIOR LEADERSHIP INTERVIEWS	100
Senior Leadership Interview Procedures	101
Senior Leadership Interview Conclusions	102
Senior Leadership Interview Recommendations	105
F. TRAINING QUALITY VERSUS QUANTITY	114
G. COMPARISON OF THE EFFECTIVENESS OF TWO TRAINING STRATEGIES: AIT/AC VERSUS SOJT	117
H. TASK PERFORMANCE RATINGS FOR MOSs 64C, 71L, AND 76Y	122
I. SUMMARY OF INTERVIEW RESPONSES FOR MOSs 12B, 19D, and 19E	126
J. ABBREVIATIONS AND ACRONYMS	130

LIST OF TABLES

Table 1. Soldier retention.	7
2. Leadership and morale.	9
3. Soldier satisfaction	10
4. Soldier rewards.	11
5. Management of training time.	12
6. Unit performance	13
7. Trainers	14
8. Reasons for individual skill training problems	15
9. Reasons for unit training problems	16
10. Need for individual skill training	25

CONTENTS (Continued)

	Page
Table 11. Time available for individual skill training	27
12. MOS qualification	29
13. The effect of two methods of MOS qualification on task performance	32
14. Training methods	35
15. Common Tasks	36
16. Combat Engineer (12)	37
17. Cavalry Scout (19D)	38
18. Armor Crewman (19E)	39
19. Skill level one tasks required for qualification MOSs 19E/19D/12B	41
20. Tank Table VIII tasks taught by simulators	45
21. How can the use of simulator training devices be improved in your unit?	47

AN ASSESSMENT OF TRAINING NEEDS OF THE US ARMY RESERVE AND THE NATIONAL GUARD IN IDAHO

EXECUTIVE SUMMARY

Requirement:

The project purpose was to identify U.S. Army Reserve Component (RC) training needs based on the perceptions and performance of Idaho RC soldiers, to suggest improvements to perceived shortcomings, and to identify where training technology could be used to effectively implement improvements. Performance problems, problem causes, and possible solutions were identified.

Causes of poor performance have been classified by Harless (1975) into the categories of skills and knowledge, motivation, and environment. The focus of this project was on performance problems that are heavily influenced by skills and knowledge and that have potential solutions involving training technology.

Procedure:

ARNG and USAR units in Idaho provided a test bed for the project. In order to assess training performance problems, potential causes of those problems, and possible solutions, five basic procedures were followed:

1. Survey all Idaho RC personnel to identify problem areas;
2. Observe training performance at IDT and AT to identify performance problems;
3. Conduct MOS Interviews to verify performance problems, and determine potential causes;
4. Conduct Senior Leadership Interviews with NCOs and Officers to verify problems and identify possible causes and solutions;
5. Interpret accumulated data and make recommendations regarding the use of technology for improving training.

Findings:

Personnel factors. Personnel turbulence was identified as an important factor affecting the training environment. The average turnover rate, at the unit level in Idaho, for the first 10 months of 1986 was 32%. High personnel turbulence creates training performance problems by decreasing experience levels and increasing MOS reclassification training requirements. Survey

responses suggested that turbulence could be reduced by increasing the soldiers' sense of accomplishment and reducing wasted training time.

In order to assess the importance of motivation on performance, questions related to leadership, soldier satisfaction, and morale were included on the survey. One of the strengths of RC units in Idaho is the positive attitudes soldiers have toward their leaders. In addition, levels of soldier satisfaction and morale seemed to be satisfactory. Based on these data, motivation was ruled out as the most frequent cause for performance problems. The focus was drawn to lack of skills and knowledge and a difficult learning environment as the main causes.

Training management. In the training management arena, wasted training time was identified as an important problem, particularly since RC training requirements are heavy and RC training time is limited. Poor training planning was responsible, in part, for wasted training time. The problems associated with training planning were analyzed in terms of answering the planning questions of, "why, who, what, when, and where?". The following problems related to training planning were identified:

1. The need for improved guidance from higher headquarters;
2. The need for a progressive (i.e., "crawl, walk, run") training strategy to avoid attempting to train at too high an echelon for the experience level of the personnel;
3. The need for dedicated training time for NCOs to complete individual skill and small unit training;
4. The need to adequately prioritize training requirements so that soldiers can attain standards on required tasks;
5. The need for easily accessible, consolidated reference material;
6. The need to increase the frequency of, and accountability for, "hip-pocket"/opportunity training;
7. The need to reduce and schedule non-training requirements that detract from training.

Each of these problem areas can be addressed, in part, by using technology to aid the training planning process. Microprocessors at local training centers/armories can be integrated through the chain of command via modem and telephone. The planning process can be assisted by providing computer-automated job-aids which would provide training planners prompts at every step of the process, particularly in the areas noted above where training planning has been weak. The system would contain key training bases, including ARTEP/AMTEP tasks, and individual skill tasks that are prerequisites for unit missions. Skill decay information for individual skill tasks would be provided. The system would allow the chain of command to follow BTMS principles, the METL process, and provide and print in less time, effective training schedules that follow command priorities. The prompts and data bases would be of particular

assistance to inexperienced leaders. Training documents could be easily accessed and cross-referenced by adding an inexpensive mass storage device to each microprocessor. In addition, a Relational Data Base Management System (RDBMS) could be employed to help improve the efficiency of unit paperwork management.

Individual training. The primary reason for problems in acquiring and sustaining individual skills was limited training time. Survey responses suggest that a surprisingly large number of soldiers would be willing to participate in a training strategy that involved increased, paid training time at home or at the local training center/armory consistent with personal schedules. This strategy is examined in the context of MOS reclassification training and individual skill sustainment training.

In terms of the acquisition of individual skills, the biggest problem is with reclassification training for soldiers changing MOSs. The source of the problem stems from artificially restricted training strategies. To date, reclassification training for most MOSs has been limited to supervised-on-the-job training (SOJT), while future reclassification training may be limited to AC or RC school training. SOJT has been used frequently because schools take soldiers out of the unit for long periods of time and often do not meet the personal schedules of RC soldiers in terms of course length and dates. SOJT can be effective for some tasks that are practiced frequently in the unit. On the other hand, uniform standards of performance may not be achieved with SOJT. Unit NCOs often have competing responsibilities that make proper supervision difficult. In addition, unit NCOs may not be qualified to train some MOSs, particularly those with a low density.

A flexible MOS reclassification strategy is proposed that employs technology to match soldiers personal schedules. The strategy is based on test performance involving the same tasks and standards for both AC and RC soldiers. RC soldiers who are changing MOS must pass the AIT End-of-Course Comprehensive Test (EOCCT) as do AC soldiers, but the strategy for how the skills are acquired is flexible. Elements of the strategy include:

1. VCR tapes for home-based study;
2. Questions and answers handled asynchronously using the telephone and an automated message and distribution system;
3. Training center/armory based CAI/CBI;
4. Supervised hands on performance with the equipment during IDT and AT;
5. SOJT for selected tasks;
6. RF schools for MOS instruction and EOCCT testing;
7. Pay for home study (if any) dependent on passing the test.

A similar strategy was proposed for individual skill sustainment training, since limited time was again an important reason for sustainment problems. Lack of equipment in the unit

(e.g. bridge assets for Combat Engineers) was also an important skill sustainment inhibitor. The SQT could be modified by local RF schools to consist of "critical" tasks. The modified test could then be used to identify areas requiring further independent study at home or in the training center/armory, and to certify proficiency and pay, if any, for the additional study. IDT and AT periods would be used for supervised hands-on experience with actual equipment. The same training materials (VCR tapes and CAI) used for reclassification training could also be used for the sustainment training strategy, with some additions for unit tasks. Scale models (e.g. model bridges) may be helpful to teach some tasks when equipment is unavailable.

Collective training. Tank Table VIII gunnery tasks were identified as problems for armor crews. There are strict time limits for Table VIII that are designed to help train tank crews in battlefield survivability. A variety of factors combine to limit practice time in tank gunnery tasks including (a) crew turbulence, (b) weather conditions, (c) limited range availability, (d) limited ammunition allocation, (e) travel time, (f) range set-up, and (g) waiting-in-line time. Appropriate use of tank gunnery simulation devices in and around the home station can help overcome these limitations on crew practice time. The following reasonable-cost devices that train a wide range of tank crew skills at or near home stations were discussed: (a) Laser Target Interface Device (LTID), (b) Scale Force Model Tanks, and (c) Guard Unit Armory Device, Full Crew Interactive Simulation Trainer (GUARDFIST). The Scale Force Model Tanks can be used to simulate multiple enemy targets that must be engaged by soldiers in their tanks using Multiple Integrated Laser Engagement System (MILES) equipment. The model tanks can be used in conjunction with a subcaliber device to inexpensively train, "call for and adjust indirect fire," another low performance task in Armor units.

RC soldiers encountered difficulties in operating and maintaining MILES, and using controllers to appropriately control MILES exercises. As a result ARTEP training with MILES lacked realism. MILES is new to the IDARNG and must still be borrowed for Idaho USAR units. Part-time soldiers as yet have received little training on the operation and maintenance of MILES and have had little opportunity to observe effective tactical training with MILES. A training committee was recommended to fulfill time consuming training preparation and control functions, including setting up ranges, and mounting MILES on tracked and wheeled vehicles, in advance of IDT and AT training.

The creation of job-aids was recommended to help part-time soldiers mount and trouble-shoot MILES equipment on tracked and wheeled vehicles.

Gowen Field is creating a Multi-Purpose Range Complex (MPRC) and Combined Army Training Facility (CATF) which will be similar to the National Training Center (NTC) in terms of

instrumentation, including automated ranges and battle replay capability. RC soldiers will have the opportunity to observe and experience realistic training. The facilities are intended for use by RC units nationwide, at least those that have received adequate preparation. An effective training strategy needs to be developed that will prepare units for this experience within RC time constraints. The strategy will likely require the use of tank gunnery simulation devices at home station as well as tank-on-tank, section-on-section drills using MILES at home station.

INTRODUCTION

The purpose of this project was to identify Army Reserve Component (RC) training needs based on the perceptions and performance of Idaho Army National Guard and Army Reserve soldiers in the field, to suggest improvements, and to identify where training technology could be used effectively to implement improvements. The investigation was based on the premise that effective solutions to RC training problems are dependent upon an accurate assessment of training needs, especially in a field environment, since that is where solutions must ultimately be implemented for the majority of RC units. In order to improve the likelihood of successfully implementing solutions, policy makers should be aware of training needs as perceived by RC soldiers in the field since these may be different, at times, than those apparent at upper echelons. This report contains a consolidation and interpretation of empirically obtained data relating RC training problems, causes, and recommended solutions.

Also included is a careful analysis of the training environment in RC units, particularly in combat and combat support units, since one way to improve training in RC units may be to improve that environment.

The reserve forces in Idaho were used as a test bed for an in-depth case study to identify training needs. Both Idaho Army National Guard (IDARNG) and United States Army Reserve (USAR) units in Idaho participated. For those new to RC training, background information about the recent history of Army RC training nationwide and an overview of the RC training environment is provided at Appendix A.

This report is organized in terms of identifying performance problems, causes of the problems, and possible solutions. Performance problems can be caused by deficits in (a) motivation, (b) skills and knowledge, and (c) training environment (Harless, 1975). We focus here on performance problems that are heavily influenced by a lack of skills and knowledge. Solutions to these problems can involve (a) the use of technology, or (b) administrative changes, or both. The solutions employing technology are labeled. An outline of these problems, causes, and solutions is shown at Appendix B.

METHOD

Overview

In order to assess the training problems, potential causes of problems, and solutions, of the Reserve Component in Idaho, three basic procedures were followed:

1. Survey (identify problems);

2. Enlisted Personnel Interviews (Verify problems, determine potential causes, elicit solutions);
3. Senior Leadership Interviews with NCOs and Officers (verify causes and identify potential solutions).

To accomplish this, the following steps were employed, in the order listed:

1. Conduct preliminary interviews of Active Component (AC) and Reserve Component (RC) training personnel in the Sixth Army area;
2. Collect periodic reports, documents, and objective data that relate to training needs in Idaho;
3. Develop and pilot test a draft survey based on interview and record data input;
4. Revise the survey and administer it to Idaho RC personnel (see Appendix C);
5. Analyze responses to the survey;
6. Follow up the survey with Enlisted Personnel Interviews of RC soldiers to obtain greater detail about reasons for low performance on tasks in the highest density MOSs with less than an 80% qualification rate;
7. Provide feedback to key RC personnel about survey and interview results. Conduct Leadership Interviews with Senior Leaders, composed of 9 NCOs in one group and 8 Officers in another, to obtain perceptions of the costs and potential benefits of solving particular problems and implementing recommended solutions;
8. Interpret accumulated data and make recommendations regarding ways to improve RC Training.

Survey Procedures

Information Collection

Preliminary interviews were conducted with AC and RC training personnel to gain their ideas, perceptions, and opinions regarding the status of RC training problems. AC personnel were from HQ Sixth Army and Readiness Groups, Ft Douglas, Ft Lewis, and Presidio of San Francisco. USAR personnel were from HQ 96th ARCOM and the 6228th USARF School. Army National Guard (ARNG) personnel were from the State staffs of California, Oregon, Washington, and Idaho, as well as from Idaho commanders, regimental, battalion/squadron, company/troop staffs, and fulltime training personnel.

Information was assembled from Idaho reports pertaining to Officer Duty Specialty Skill Indicator (DSSI) and Enlisted Military Occupational Specialty (MOS) qualification, personnel strength and turnover, Annual Training (AT) evaluations, individual and crew served weapons qualification (e.g., Tank

Table VIII), and Mission Essential Task Lists (METL). In addition, Inactive Duty Training (IDT) and AT unit training schedules, plans, and guidance were collected and evaluated.

Survey Development

Information collected through interviews and documents was used to develop a draft survey which contained questions designed to gain the perspective of the RC soldier in the tentatively identified needs areas. The draft survey was reviewed by AC, and Senior ARNG and USAR, personnel, edited, and pilot tested with the personnel of the Idaho ARNG. Pilot testing consisted of respondents completing the survey and then discussing each question as to clarity and purpose.

Based on the results of the pilot testing, and all other comments and recommendations from reviewers, the survey was revised. The final version of the survey is shown at Appendix C. It is organized into four major content areas, as follows:

1. Personnel factors affecting training (retention, leadership, soldier satisfaction, and morale);
2. Training management;
3. Individual training;
4. Unit training (see Bynum and Fischl, 1986).

In addition, individual Soldiers Manual tasks for six Duty Military Occupational Specialties (DMOS) were selected for detailed study in the survey. These six DMOSs were selected on the basis of being the six highest density DMOSs in Idaho that also had less than 80% qualification rate. The rate was calculated by the Idaho RC in terms of the percentage of assigned (as opposed to authorized) personnel (see Appendix D for DMOS density and qualification data in the Idaho RC).

Survey Administration

The survey was administered to RC personnel in Idaho, during FY 1986. The major Idaho RC units that participated in the survey were:

1. HQ, 116th Armored Cavalry Regiment (ACR), IDARNG
2. 2/116th Armored Cavalry Squadron, IDARNG
3. 116th Engineer Battalion, IDARNG
4. 145th Supply and Service Battalion, IDARNG
5. HQ, STARC, IDARNG
6. 321st Engineer Battalion, USAR
7. 6228th USARF School, USAR
8. 539th Signal Company, USAR
9. 1016th Supply and Service Company, USAR

Units were responsible for the administration of the survey to their soldiers, including insuring that each soldier present at the drill took the survey and then returned it to the unit.

sealed in the envelope that was provided. The sealed envelope was designed to encourage anonymity. Unit personnel who administered the survey were instructed to maintain soldier anonymity. Units returned the completed surveys to the Boise TTFA. A unit number was assigned to each individual survey.

Survey Population

An attempt was made to include all RC soldiers in Idaho in the survey. Based on personnel rosters provided by the chain of command, there were approximately three thousand one hundred fifty (3150) USAR and ARNG soldiers in Idaho units. Idaho RC units received one survey for each soldier. Units administered the surveys. Two thousand two hundred four (2204) surveys were completed and returned, for a completion rate of 70%. One unit failed to return any surveys. The remaining soldiers who did not complete the surveys represent a fairly typical absentee rate from drill on a given month. There are a wide variety of different reasons (positive and negative) for absences from drills.

Data Analysis

Survey data was transferred to tape using manual data entry with verification. Analyses of survey data consisted primarily of computing percentages and cross tabulations on a mainframe computer using SPSSX. Missing data was eliminated in a pairwise rather than a listwise fashion. Out-of-range values were eliminated as missing data.

Interview Procedures

Purpose

The purpose of the Enlisted Personnel Interviews was to determine reasons for low performance on MOS 19E, 19D, 12B tasks. Interviews with soldiers having MOS 19E, 19D, or 12B were conducted, and were designed to answer questions such as whether a performance problem was due to lack of initial acquisition (low MOS qualification), skill retention (lack of practice), or poor performance due to environmental conditions such as lack of time or critical equipment. In addition to Enlisted Personnel Interviews, Officers and Senior NCOs were queried about weak unit training tasks that were identified on the survey.

Procedure

For the six highest density MOSs in Idaho, with less than 80% qualification rate, soldiers were asked to rate, on the survey, whether or not they could perform twenty (20) individual tasks in that MOS. The three highest density MOSs with less than 80% qualification rate, and which have command emphasis in Idaho, were selected for more detailed study (19E, 19D, and 12B). In each of the three MOSs, the seven lowest rated performance tasks,

of the twenty, provided the basis for follow-up interviews with RC personnel in those MOSs.

Enlisted Personnel Interviews

A total of 150 structured interviews with enlisted personnel having MOS 19E, 19D, and 12B were conducted by the investigators during July, August, and September. All personnel available at that time in the three MOSs were interviewed. Interview results were analyzed and consolidated with results from the survey. Areas of need relating to RC training were refined and formatted for use in the Leadership Interviews.

Senior Leadership Interviews

Leadership Interviews were held in a group setting with Senior Idaho RC Officer and NCO personnel. The leaders selected for interview were those in visible leadership positions. Tentative needs identified by all previous sources were discussed and suggestions for improvement proposed. Needs were prioritized by leaders in terms of the value to the Idaho RC of solving the problems that were identified. Officers and NCOs provided suggestions for improvement linked to areas of identified needs. Suggestions for improvement were analyzed in terms of potential cost/benefit to the Idaho RC.

Observation Procedures

In addition to data gathered from Surveys, Enlisted Personnel Interviews, and Senior Leadership Interviews and discussions, information was obtained by direct observation of individual and crew served weapons firing and ARTEP training during selected IDT and AT periods. Information was also obtained by observing After-Action Reviews of ARTEP performance at AT '86 and reading FORSCOM 1R reports evaluating the AT '86 performance of Idaho RC units. This information was obtained from an armored cavalry squadron, and an engineer battalion.

PERSONNEL FACTORS AFFECTING TRAINING

Personnel Turbulence

Overview

Personnel turbulence creates training problems for soldiers and units. In the Idaho RC, the average turnover at the unit level for the first 10 months of FY 1986 was 32%, based on the information provided by the personnel (SIDPERS) data base. While 32% of the soldiers were lost to a given unit, approximately 13% transferred to different units either within or outside Idaho, leaving 19% actually lost to the RC. These statistics are fairly typical, with Idaho ranking near the middle, among all states, in

retention. In recruiting, Idaho is near the top and has embarked on a program to cut manageable losses in half. The total picture, however, is one of a constantly churning population. Based on both SIDPERS and self-report survey data, losses are most likely to occur among enlisted soldiers in their first term of enlistment, with greater stability among NCOs and Officers who are beyond their first term of enlistment (see Table 1).

Personnel Turbulence as a Cause of Training Performance Problems

Personnel turbulence provides a considerable training challenge even when manageable losses are reduced. When soldiers move and change units they frequently must change MOSs, exacerbating the problems of maintaining MOS qualification. Under the guidance of the Total Force Policy, (see Appendix A for a summary of the Total Force Policy), units must maintain required levels of readiness. The difficulties in doing so can be seen when the annual turnover rate of over 32% is projected over several years. Fortunately, in Idaho, as in most RC units, the leadership cadre is reasonably stable. It is more stable, in fact, than in most AC units. However, these statistics do highlight the difficulties in maintaining individual and unit skills at the E1-E4 level where most turbulence takes place. In fact, an examination of personnel turbulence, alone, suggests that an emphasis on individual skill and small unit (squad, platoon) training in units might be essential. For example, in Armor units there is nearly always high tank crew turbulence among MOS 19E soldiers. This means fundamental individual armor and tank crew tasks require constant attention and retraining for a significant number of new soldiers.

While these turbulence statistics point out a difficult training challenge, it is important to put them in historical perspective. The RC, in general, has cut its turnover rate approximately in half since FY 1981. What we see today, is a dramatic improvement in stability over the post-Vietnam era, when draft motivated soldiers left the RC in large numbers.

Training Problems as a Cause of Turbulence

In the survey, RC soldiers in Idaho were asked if they were, seriously considering leaving the RC, and if so, why. The question and responses are shown in Table 1. Thirty-eight percent of the soldiers indicated they were seriously considering leaving. Soldiers gave as high priority reasons for leaving, a reduced sense of accomplishment and wasted time. Training management techniques that emphasize the efficient use of time and provide soldiers with a sense of accomplishment should help to improve both retention and the quality of training. Issues related to training management and the use of time are discussed later.

Other frequent reasons soldiers gave for considering leaving, include career and family responsibilities (Table 1).

TABLE 1
SOLDIER RETENTION

I AM SERIOUSLY CONSIDERING LEAVING THE RESERVE COMPONENT UPON COMPLETION OF MY CURRENT TERM OF ENLISTMENT.

	YES		YES
FIRST-TIME SOLDIERS	54%	ENLISTED SOLDIERS (E1-E4)	47%
BEYOND FIRST TERM	32%	NCOs (E5-E9)	35%
		OFFICERS	16%
TOTAL SAMPLE	38%		

IF YES, WHY HAVE YOU CONSIDERED LEAVING?

	ENLISTED (E1-E4)	NCOs AND OFFICERS
CAN'T ACCOMPLISH ALL I WOULD LIKE TO DO	46%	40%
TOO MUCH WASTED TIME	40%	32%
LOW PAY	40%	21%
HEAVY CIVILIAN CAREER RESPONSIBILITY	38%	33%
FAMILY REASONS	32%	26%
POOR QUALITY TRAINING	24%	20%
MOVING TO NEW AREA	14%	5%
MEDICAL REASONS	4%	4%
RETIREMENT	4%	25%

These are commonly recognized factors (Grissmer and Kirby, 1985).

Table 1 also shows that "low pay" is, apparently, an important issue to low ranking soldiers in their first term of enlistment (see Grissmer and Kirby, 1985, for a discussion of pay and retention).

Soldier Motivation

Motivation as a Cause of Performance Problems

Harless (1975) categorized the possible causes for performance problems in organizations into three categories: (a) motivation, (b) skills and knowledge, and (c) training environment. When training solutions to performance problems are being considered it is important to make sure that skills and knowledge are the cause of the problem. Training solutions cannot fix performance problems caused by motivation or by the environment. In order to assess the extent to which performance problems in the Idaho RC are caused by motivation, several questions related to motivation were included in the survey and are reported here.

One of the strengths of RC units in Idaho is the positive attitudes soldiers have toward their leaders. In addition, there are generally satisfactory levels of satisfaction and morale found in these units. These conclusions are supported by the soldier survey responses noted in Tables 2 and 3. The responses are very positive compared to what often has been found when surveying AC units (Wessner and Franklin, 1975). In addition, when soldiers were asked to identify reasons for perceived difficulty in attaining individual and unit proficiency, leadership and instructional quality were seldom selected as a reason for proficiency problems (See Tables 8 and 9). The data in Tables 2 and 3 suggest a high level of cohesiveness among RC soldiers and generally high motivation. This is an important asset of the Idaho RC that could become even more important if rapid mobilization were ever required.

Based on the data derived from this investigation, motivation was ruled out as the most frequent cause for performance problems. Instead, the focus was drawn to lack of skills and knowledge and a difficult training environment as the main causes for performance problems. Additional detail about performance problems and causes is provided in subsequent sections.

Rewards and Promotions

Although motivation to perform is generally high, Table 4 suggests improvements in this area are possible by increasing rewards and more closely linking promotions to performance.

TABLE 2
LEADERSHIP AND MORALE

	PERCENTAGES		
	AGREE	NEITHER	DISAGREE
OUR NCOS ARE EASY TO WORK WITH	84	12	4
OUR OFFICERS ARE EASY TO WORK WITH	74	18	8
NCOS AND OFFICERS IN MY UNIT OFTEN CHECK TO SEE THAT TRAINING IS GOING WELL	71	21	8
OFFICERS IN MY UNIT ARE WILLING TO DELEGATE APPROPRIATE RESPONSIBILITY TO NCOS	71	23	6
MOST TRAINING IN MY UNIT IS GIVEN BY LOWEST LEVEL SUPERVISORS (SQUAD LEADERS, CREW CHIEFS, VEHICLE CDRS)	65	27	8
UNIT MORALE IS HIGH	59	28	13
THE QUALITY OF TRAINING GIVEN BY MY FIRST LINE SUPERVISOR IS:			

*SATISFACTORY: 91%

**UNSATISFACTORY: 9%

*Combines the categories of: Outstanding, Excellent, Satisfactory
** Combines the categories of: Marginal and Unsatisfactory

TABLE 3
SOLDIER SATISFACTION

HOW SATISFIED ARE YOU WITH:	SATISFIED	NEITHER	DISSATISFIED
THE JOB YOU HAVE BEEN ASSIGNED	80%	12%	8%
BEING IN THE RESERVE COMPONENT	75%	15%	10%
THE TRAINING YOU HAVE RECEIVED	66%	17%	17%
THE PAY IN THE RESERVE COMPONENT	64%	17%	19%

TABLE 4

SOLDIER REWARDS

	PERCENTAGES		
	AGREE	NEITHER	DISAGREE
MY CHANCES FOR PROMOTION WILL INCREASE IF I PERFORM WELL DURING UNIT FIELD TRAINING EXERCISES.	48	29	23
MY CHANCES FOR PROMOTION WILL INCREASE IF I PERFORM WELL ON SOLDIERS MANUAL TASKS.	40	35	25
SOLDIERS WHO DESERVE TO BE PROMOTED ARE NOT PROMOTED FAST ENOUGH.	60	28	12
THERE SHOULD BE MORE AWARDS AND RECOGNITION	66	29	5
MILITARY DISCIPLINE IS HANDLED IN A FAIR AND EFFECTIVE MANNER IN MY UNIT.	60	27	13

TABLE 5
MANAGEMENT OF TRAINING TIME

1. Which of the following would improve the performance of your unit the most?

Organization of training time	56%
Access to simulation training devices	51%
Rewards for effective performance	45%
Preparation of trainers	38%
Access to computer assisted instruction	36%
Training materials (TMs/FMs)	34%

2. About how much of the training time in your unit do you think is wasted?

Average: 24%

3. There are many reasons for wasted training time. In what category do you think the most important reasons fall? (Check all that apply.)

Training lacks priority when something else comes along	56%
Training facilities, equipment, or materials not available	44%
Training should be better organized	39%
Instruction is not presented in interesting ways	26%
Equipment often breaks down	19%
Trainers are not well prepared	19%

4. There is too much paperwork in the Reserve Component
Agree 59% Neither 36% Disagree 5%

5. About how much of your total drill time is spent on training of any kind?

Average: 64%

6. Short notice changes to training schedules waste a lot of training time.

Agree: 67% Neither: 24% Disagree: 9%

7. How often does your training schedule change?

5+ times per year	24%
4-5 times per year	14%
2-3 times per year	40%
1 time per year	17%
0 times per year	5%

TABLE 6
UNIT PERFORMANCE

	PERCENTAGE OF RESPONSES THAT WERE ¹ SATISFACTORY, EXCELLENT, OR OUTSTANDING		
	OFFICER	E5-E9	E1-E4
1. FIELD TRAINING, OVERALL (24)	94 ²	93	92
2. OPERATOR MAINTENANCE (34)	89	91	93
3. CREW SERVED WEAPONS PROFICIENCY (24)	87	86	92
4. COMBINING INDIVIDUAL/UNIT TRAINING (39)	83	87	89
5. ABILITY TO CONDUCT SUSTAINED OPERATIONS/SUPPORT (30)	83	89	91
6. LEADER SUPERVISION IN THE FIELD (38)	83	89	92
7. PRODUCTIVE USE OF TRAINING TIME (37)	79	81	83
8. ESTABLISH/OPERATE/MAINTAIN COMMUNICATIONS (33)	78	82	86
9. REALISTIC USE OF MILES (31b)	77 ³	83	83
10. PROPER CAMOUFLAGE TECHNIQUES (32)	74	83	88
11. OPERATE AND MAINTAIN MILES (31a)	68 ³	78	89
12. REALISTIC GUIDANCE AND ASSISTANCE FROM HIGHER HEADQUARTERS (29)	62	65	83

1. Percentage of responses Marginal/Unsatisfactory are found by subtracting tabled percentages from 100%.
2. Question numbers from survey questionnaire at Appendix C, are in parentheses.
3. MILES ratings are based on only those soldiers (28%) who said their units used MILES.

TABLE 7

TRAINERS

ARE YOU A TRAINER? YES: 52% NO: 48%

ARE YOU PAID FOR YOUR LESSON PREPARATION TIME?

PAID FOR ALL: 12% PAID FOR PART: 19% NOT PAID: 69%

DO YOU HAVE ENOUGH TIME FOR LESSON PREPARATION TO DO A GOOD JOB?

YES: 71% NO: 29%

HOURS/MO OF PERSONAL TIME SPENT IN TRAINING PREPARATION:

AVERAGE: 6

HOURS OF DRILL TIME SPENT IN TRAINING PREPARATION:

AVERAGE: 3

HOW MUCH ADVANCE NOTICE DO YOU USUALLY GET TO PREPARE TRAINING?

3 OR MORE DRILLS	18%
2 DRILLS	24%
1 DRILL	38%
LESS THAN 1 DRILL	14%
NO DRILLS	6%

NOTE: The responses in this table are based on those soldiers
who said they were trainers.

TABLE 8
REASONS FOR INDIVIDUAL SKILL TRAINING PROBLEMS

DO YOU FIND IT DIFFICULT TO LEARN AND MAINTAIN MOS SKILLS AT THE REQUIRED LEVELS OF PROFICIENCY?

39% YES

IF YES, WHY?

NOT ENOUGH TIME WORKING IN MY MOS	51%
NOT ENOUGH TRAINING IN MY MOS	51%
NOT ENOUGH TRAINING MATERIALS	35%
NOT ENOUGH SIMULATORS AND TRAINING DEVICES	35%
NOT ENOUGH EQUIPMENT	33%
WASTED TRAINING TIME	31%
INADEQUATE TRAINING MATERIALS	23%
INADEQUATE TRAINING AREAS	22%
UNPREPARED INSTRUCTORS	10%
UNQUALIFIED INSTRUCTORS	9%
WRONG EQUIPMENT	9%
CAN'T GET TO TRAINING AREAS	8%

Note: Responses are those of enlisted soldiers.

TABLE 9
REASONS FOR UNIT TRAINING PROBLEMS

GIVEN THE CURRENT SYSTEM, IS IT DIFFICULT FOR YOUR UNIT TO ATTAIN
AND MAINTAIN REQUIRED LEVELS OF UNIT READINESS?

47% YES

IF YES, WHY?

NOT ENOUGH TRAINING TIME	54%
LACK OF COMMUNICATION	45%
TOO MUCH PAPERWORK	42%
TRAINING TIME WASTED	39%
NOT ENOUGH TRAINING EQUIPMENT	37%
NOT ENOUGH SIMULATORS AND TRAINING DEVICES	35%
POOR PLANNING	34%
POOR TRAINING AREAS	24%
NOT ENOUGH TRAINING MATERIALS (AIDS, FMs, TMs)	22%
TRAINING AREAS TOO FAR AWAY	19%
OFFICERS POORLY TRAINED	16%
WRONG EQUIPMENT	14%
INSTRUCTORS ARE NOT WELL PREPARED	13%
TOO MANY POOR PERFORMERS IN THE UNIT	12%
UNQUALIFIED INSTRUCTORS	9%

TRAINING MANAGEMENT IN UNITS

General Problem: Wasted Training Time

Tables 5, 6, and 7 cover information related to training management. Table 5 and Table 6 (Question 7) suggest that productive use of time and wasted time are general problems. The word "wasted" was not defined on the survey and soldiers were free to furnish their own interpretation. Thus, it should be understood that what might be wasted time for one could well be valuable training for another (e.g., soldiers who ride in the back of a truck versus the driver of the truck). Time problems stem from heavy RC mission requirements, minimum available training time to attain mission proficiency, and the requirement for RC units to be mission capable in the event of a rapid mobilization and deployment (Appendix A). Tables 8 and 9 highlight the importance of the time issue. Soldiers were asked if they found it difficult to maintain MOS skills and unit readiness, and if so, why. Insufficient training time was the most common reason given for proficiency difficulties. Given that requirements are heavy, that the time available to train is limited, and that gaining more training time is difficult (Appendix A), wasted time and non-productive use of time become a significant problem.

Specific Problem: Poor Training Planning

An important cause of wasted training time is poor planning, which constitutes a problem in its own right. Training planning in units requires that the following questions be answered: "Why, who, what, when, and where." These questions must be answered on a decentralized basis in a large number of separate units with different leaders. Some of these leaders are inexperienced in planning. Furthermore, when leaders change, planning changes. For these reasons training planning in units can be complex. This situation can be contrasted with the Service School environment where training planning is more centralized and stable.

In order to obtain greater detail about causes of training planning problems, each of the training planning questions, "why, who, what, when, and where" is examined separately.

Training Rationale: The "Why" Question

A prerequisite to effective training in units is effective training management. Unit training management is based on the Battalion Training Management System (BTMS, FM 25-1 to 25-6), which has recently been expanded to be applicable from Battalion/Brigade through Corps level (See FC 25-100, 1986). The goal of unit training management is to prepare for wartime missions which in the RC, are derived from Capstone program or

unit roundout alignments. These alignments identify wartime contingency plans, chain of command, likely areas of deployment, and deployment time frames. Units construct Mission Essential Task Lists (METL) that are composed of those Army Training and Evaluation Program (ARTEP) tasks that are needed to train for the wartime mission. The METL becomes increasingly specific at Battalion and Company level. In units, Soldiers Manual tasks are selected for individual training based on the extent to which they are required to support METL ARTEP missions. These tasks are defined as "critical". The ARTEP usually provides a matrix which links ARTEP missions to prerequisite MOS tasks. From the ARTEP matrix, unit leaders identify "critical" MOS tasks.

A critical feature that separates training planning in the RC from the AC is the heavy use of the METL concept in the RC. The METL delimits the ARTEP missions RC units are responsible for to those essential for the accomplishment of assigned wartime missions. Likewise, the METL delimits individual MOS tasks to something less than the total tasks contained in the Soldier Training Publication (STP) by allowing deletion of STP individual tasks that are not required to support METL ARTEP tasks.

Confusion can arise in planning due to different definitions of "critical" MOS tasks. In the AC, TRADOC school, environment, all MOS tasks in the STP manual are "critical" (ITRO, 1985). In the RC, however, "critical" tasks refer to a subset of STP tasks. Perhaps these tasks should be further identified as "METL critical" MOS tasks to avoid confusion. Beyond this, there is further confusion in the field about the definition of "METL critical" MOS tasks. Soldiers in units frequently delimit "METL critical" tasks to those that are scheduled for training in the current year. A task can be "METL critical" and still not be scheduled for training in the current year if unit leaders judge soldiers to be currently sufficiently proficient in these tasks. A distinction should be made, by units, between scheduled "METL critical" tasks and unscheduled ones so that soldiers are clearly aware of which tasks they are accountable for regardless of what is currently scheduled.

Better guidance from "higher headquarters" could help to avoid definitional confusion in this area (see Table 6, Question 12). A good place to start would be a clear statement of the METL process in BTMS (FM 25-series) for RC units. In addition, the battalion/squadron commander should provide, to subordinate units, more definitive guidance on selecting and training a minimum number of "METL critical" MOS and collective tasks.

This approach would tend to standardize those tasks for individual skill and collective training that are required to support the goal of mission capability. Individual skill training is not always planned in this way, as noted in RC training plans and schedules, where individual tasks are not necessarily part of battalion level schedules or guidance.

Training Echelon: Who is to be Trained?

The "who" question asks, "which soldiers need to train on individual skills, and which sub-units need to train at what echelon?" In order to answer the "who" question, unit leaders must decide how to treat progressive training (e.g., "crawl, walk, run") within the unit.

Problem: Progressive training. There seems to be two common problems in how progressive training is handled in the RC training environment. The problems are at opposite extremes. At one extreme, RC combat units attempt to train at higher echelons (e.g., company/battalion) without first being trained in essential prerequisite individual skills and low echelon drills. This tends to produce ineffective unit training and wasted training time for enlisted soldiers who need individual skill training. This appears to be a common problem for RC combat units due to the pressure to be unit ready--stemming in part from the Total Force Policy (Appendix A). At the opposite extreme are units that plan for an almost exclusive focus on individual skill training, in order to ensure effectiveness at this minimum level. This approach is more common in RC combat service support units where unit readiness more closely approximates the sum of soldiers' individual skill attainment. Advocates of this type of training focus were found less among RC soldiers than among some AC personnel at various advisory and assistance levels. Observation of 1986 Idaho RC AT and review of comments from AT evaluation reports suggest that unit AT training plans reflected the first common problem (i.e. attempting to jump in at too high an echelon, without having individual skill and lower echelon prerequisites in place).

Administrative solution. In the Senior Leadership Interviews, some leaders recommended, as a minimum, an increased focus on small unit training through platoon level (Appendix E: Table E-5, solution 2b; Table E-4, solution 5a). This training would be progressive ("crawl, walk, run" strategy) to include those individual skills and crew drills which are prerequisites for small unit exercises. This suggestion was applied to combat units, recognizing that their wartime missions require them to be prepared at the company and battalion level and beyond. Focusing training at the small unit level, during IDT, was considered the best way to realistically attain proficiency through platoon level. Leaders also expressed the opinion that if soldiers could attain proficiency through platoon level, then proficiency through company and battalion level could be accomplished fairly rapidly, thereafter.

Training Content: What is to be Trained?

Another question that must be answered in planning training involves, "what is to be trained?" In the unit environment this is an ongoing question. It involves the creation of a METL at

each echelon and the creation of a "critical" task list for those individual skills designed to support the METL.

Training priorities. The issue involved is one of prioritizing what is to be trained in the context of heavy training requirements and little training time. In creating training plans, a commander must make a decision along a quality versus quantity continuum. Given time constraints, is it better to train a few things well or many things poorly? This issue is discussed in greater detail at Appendix F. Of course, it is possible to create plans that fall too far toward either the quality or the quantity extreme. The quality extreme involves increased risk of leaving important tasks out while the quantity extreme involves the risk of never training to standard, or attaining excellence on any tasks.

Soldiers in the Senior Leadership Interviews felt that the most common problem in planning was creating plans that fail to adequately prioritize what must be trained, and as a consequence, fall toward the quantity extreme. The solution, in the leaders eyes, was to move in the quality direction in planning, and prioritize, or reduce where possible, training requirements (Appendix E: Table E-3, solution 2a; Table E-5, solution 3a).

Training reference material. Another problem associated with, "What is to be trained?", involves the lack of concise self-contained reference material. During interviews with soldiers in the field, comments were often made about the voluminous required reference material (e.g., Soldier Training Publications, Field Manuals, Technical Manuals, etc.). Much of this material needs frequent cross referencing to other documents which soldiers may or may not have, particularly in a field environment. One soldier commented, facetiously, that a Winnebago was needed to carry around the library of required reference material. Many expressed a desire for simplification and consolidation in this area. Soldiers felt that self-contained reference material should be available that can support the "hip-pocket" individual skill training that is supposed to occur in a field environment.

Training Scheduling: When, Where is Training Conducted?

Problem: Dedicated training time for NCOs. NCOs in the Senior Leadership Interviews were concerned that there is a lack of needed and dedicated training time provided to first-line supervisors. This is time that would enable them to conduct individual skill and small unit training for their subordinates. Often, this time is either not scheduled or is disrupted by other requirements. The lack of dedicated training time for NCOs to train individual and small unit skills is a training scheduling problem. It is also related to the problem mentioned earlier of attempting to train at high echelons without the necessary individual and small unit skills in place (i.e. lack of a progressive training program which follows the "crawl, walk, run"

training strategy).

Solution: Scheduling flexibility. Leaders in Senior Leadership Interviews were in favor of flexibility in training schedules if this would help achieve training objectives. NCOs suggested the possibility of split drills, with platoons, for example, drilling on different weekends. This would provide dedicated time for lower echelon NCOs to train their soldiers on essential prerequisite tasks (Appendix E: Table E-5, solution 2h; Table E-3, solution 4a). Officers in the Senior Leadership Interviews suggested split drills may not be feasible due to the increased supervisory time required of officers and the logistical problems involved in supporting such a schedule.

Officers recommended plans that would provide junior NCOs with dedicated training time during a single weekend, without splitting the drill. One plan called for progressive training on one weekend on an ARTEP task by scheduling dedicated training time Saturday morning, for crew or squad training under first-line supervisors, then platoon training Saturday afternoon, and culminating in company level training Sunday morning. During squad/crew training time the company/troop commander might conduct planning sessions or a terrain walk with unit leadership. However, the focus would be on training one echelon at a time. The commander can often tell if the time given junior leadership was well spent by the performance of the crews/squads during the platoon and company versions of the exercise. At the lowest echelons repetition is built into the scenario, thus increasing the potential for retention. A related plan calls for training different echelons, from individuals through platoons, on successive monthly drills, culminating in a company level exercise at the end of a specific period.

Another common training plan on a single weekend involves the station concept with focus on small unit or individual skill training. Soldiers rotate between stations and are scheduled in such a way as to avoid down time between stations. Each station is dedicated to training on an individual skill or small unit task required for completing an ARTEP mission.

Problem: Infrequent "hip-pocket" training. A common example of inadequate training planning can involve the large unit Field Training Exercise (FTX). This type of exercise has dual focus, one at the large unit level and another at lower echelons. The focus at the large unit level often overshadows the training at lower echelons. The "who/what" questions can be answered for the large unit and, as a result, accountability is high at that level. However, during large unit FTXs, there are frequent periods of down time for lower echelon soldiers as leaders become involved with planning and mission execution. During this down time, first-line supervisors should conduct "hip-pocket", individual skill, or small unit training, based on observed or likely performance shortcomings within the squad or crew. It is difficult to answer the "who/what" question for this

kind of training, if in advance, the first-line supervisor does not know what must be taught or does not have the required training references, location, and time for training identified. The first-line supervisor may not even know if a delay will be for a few minutes or several hours. Because these questions can't be answered in advance, the accountability for this type of training is low and the training often does not occur at all. However, without effective "hip-pocket" training, large scale unit training exercises can be very expensive in terms of wasted time for the lower ranking soldier. In worst cases, (during large unit FTXs) enlisted soldiers can become nothing more than training aids.

"Hip-pocket" (opportunity) training tends to occur infrequently because it is difficult to plan and, therefore, difficult to hold NCOs accountable for training that is not carefully planned. In addition, there seems to be little consolidated training material, currently in use, that is designed for the "hip-pocket"/opportunity training environment.

Solution: "Hip-pocket" training aids. Walkman audio recordings, coupled with visuals on cards, could be used as job-aid reference material designed specifically for the "hip-pocket" opportunity training environment. The materials could be used during travel time to and from training areas, as well as during lulls in collective exercises and IDT training time. Initially, these job aids could be developed for "METL-critical", low performance tasks for 19E, 19D, and 12B MOSs (see the Individual Training section for identification and discussion of low-performance tasks in these high-density MOSs).

Problem: Scheduling non-training tasks. Non-training requirements can interfere with training time. In Table 5, question 3, the reasons for wasted training time are listed. The fact that other activities take precedence over training is the most frequent reason selected for wasted training time. In Table 5, question 4, respondents agree that there is too much paperwork. In Table 9, "too much paperwork" is the third most frequent reason soldiers give for their difficulties in attaining unit readiness. These data support the conclusion that non-training requirements can detract from training time.

Solution: Administrative drill. Soldiers in the Senior Leadership Interviews suggested handling the conflict between training and nontraining tasks by scheduling a quarterly administrative drill during which all administrative tasks required for the period would be completed. This could be accomplished either in lieu of normal drill training time, or in addition to drill training, if money were available (Appendix E: Table E-6, solution 2e; Table E-4, solution 4c).

Solution: Relational data base management system (RDBMS) for paperwork reduction. A relational data base management system (RDBMS) is software that can readily combine and format

data elements in a data base to reproduce forms and create reports. This software is reasonably user friendly because it does not require the user to keep track of many details related to data storage. RDBMS software for Electronic Information Delivery System (EIDS) compatible microprocessors is commercially available and inexpensive. Much of the paperwork that is time consuming and which tends to detract from training could be done efficiently in the training center/armory with an EIDS compatible microprocessor and RDBMS software. This could include paperwork requirements in the following areas: personnel (SIDPERS), Unit Status Reports, Training (ammunition, equipment, range requests, training schedules), supply, and logistics. In order to make such a system efficient for use at the company and battalion levels, many of the standard forms and reports would need to be pre-programmed in the RDBMS language and made readily accessible for the RC soldier to use. Soldiers who wished to use the system to create special reports could use the system to do so, but would have to program the report in the RDBMS language themselves. This is well within the capabilities of many RC soldiers who have the interest. Such a system could become quite efficient for paperwork management if it were appropriately designed, standardized, and used across the RC.

Using Technology for Training Planning

An integrated computer-aided training planning system could be developed for the RC. It would assist with training planning, using a top down approach through the chain of command, consistent with BTMS principles, and would include the METL process. It would be integrated in the sense that each company/detachment sized unit would have its own microcomputer and hard disc, with compatible software, and be linked via telephone and modem to battalion/squadron, and from there through the normal chain of command. The software would include a commercially available RDBMS for data manipulation and report generation.

The system could provide computer automated job aids that furnish step-by-step prompts appropriate for training planning at each echelon. The prompts would carefully cover areas identified as potential problems in training planning including:

1. Progressive training options ("crawl, walk, run") for IDT training.
2. Dedicated training time for NCOs.
3. Selection of tasks consistent with commanders priorities.
4. Realistic limits on the number of tasks selected.
5. "Hip-pocket"/opportunity training, including the number of hours expected to be available, given current schedules.
6. Assignment of accountability for "hip-pocket"/opportunity training.

In addition, branch specific data bases could be included to assist in planning. For example, ARTEP/AMTEP missions would be listed and the battalion/squadron commander could select METL missions and pass them electronically to company/troop level. Individual skill prerequisite tasks associated with each METL mission could be quickly examined at company level using RDBMS reports. Associated with each individual skill task would be an estimated period of skill/knowledge retention based on a formal skill retention model (Hagman and Hayes, 1986). If the task does not fall within the period of retention since last scheduled, it becomes a candidate for being added to the current training schedule. Commanders could assign priorities to tasks at each step and the system would print the training schedules.

Associated with a users manual for the system would be a concise outline for the RC on how to do training planning, including how to answer the "who, what, where, and why" questions for planning in the RC training environment (see Sixth Army Pamphlet 21-5, as an example).

The users manual could contain a reference list of important training references and documents. Inexpensive mass storage devices now exist for microcomputers (e.g., laser disc) that would allow the training references and documents to be stored locally and updated periodically (e.g., with a single removable laser disc). This would ease the problem that exists in units of (a) attaining and (b) cross referencing the newest updated training documents. "Hip-pocket"/opportunity training aids could be stored in this mode for easy retention and retrieval.

ACQUIRING AND MAINTAINING INDIVIDUAL SKILLS

Problem: Limited individual Skill Training Time

Many of the problems in individual skill sustainment can be attributed to limited, dedicated training time for practicing these skills (see Table 10). This problem is further documented in Appendix A, page A-2, where it is noted that, on the average, unit leaders (Officers and NCOs) expend considerably more than the minimum 39 days per year for the RC. It is not considered feasible to extend this time by adding additional unit training requirements such as annual 3 week AT periods (Office of the Assistant Secretary of Defense, Reserve Affairs, 1986). In addition, unit leaders do report some difficulties in getting volunteers for school training opportunities. However, it is not clear that soldiers always get sufficient notice from their units, and that the dates and length of courses correspond to personal schedules.

TABLE 10
NEED FOR INDIVIDUAL SKILL TRAINING

	AGREE	DON'T KNOW	DISAGREE
SOLDIERS IN OUR UNIT NEED MORE TIME TO TRAIN ON INDIVIDUAL COMMON TASKS	61%	26%	12%
SOLDIERS IN OUR UNIT NEED MORE TIME TO TRAIN ON INDIVIDUAL MOS TASKS	77%	19%	4%

Note: The responses of all soldiers (Officers, NCOs, and enlisted E-1 to E-4) are included in this table. The responses of the rank groups were similar.

Solution: Home-based Training Strategy

It is useful to explore the possibilities for increasing the time available for training individual skills, both inside and outside the unit environment. Soldiers were asked if they would like to go on active duty for the RC on a seasonal basis (2-3 months/year). In Table 11, the soldier responses to this question are broken out by employment status. A surprisingly large number of soldiers indicated a willingness to serve full time, on a seasonal basis. In this context, the ARNG provides its soldiers with the opportunity to train with AC units under the Key Personnel Upgrade Program (KPUP). Likewise, USAR soldiers have had a similar Counterpart Training Program.

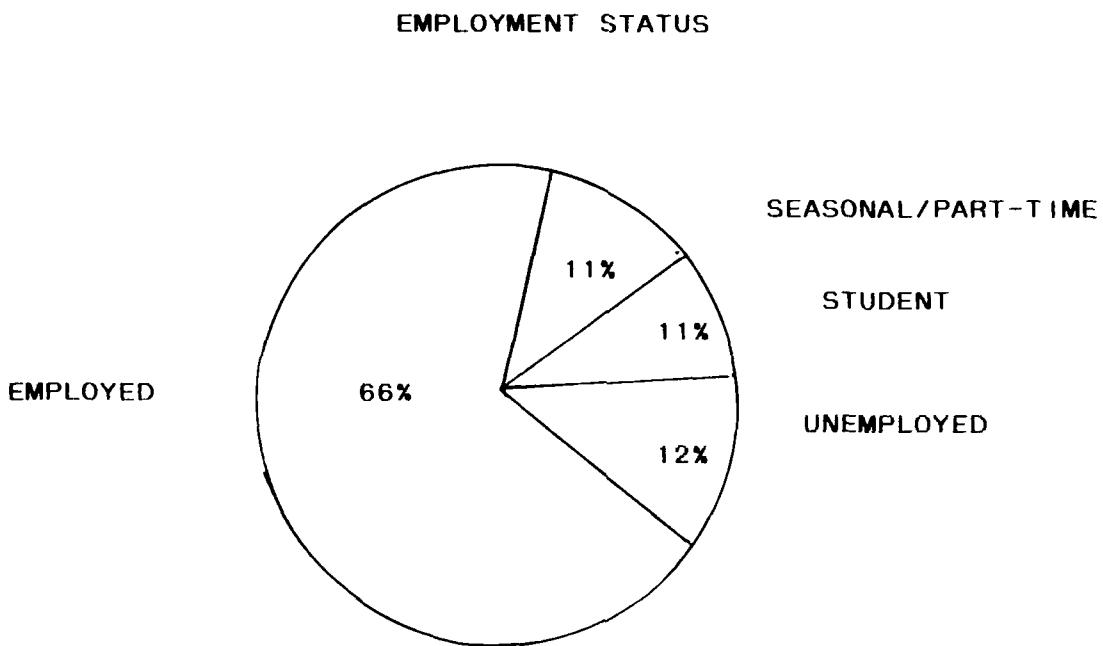
The meaning of the responses in Table 11 needs to be explored further. Implicit in the question is the assumption that soldiers would be allowed to serve full time when it would accommodate their own schedules. Many occupations provide time off, on a seasonal basis, such as teachers, farmers, construction workers, etc. Since the question does not apply to getting soldiers together at a fixed time, as is required for unit training, the question applies mostly to individual skill training opportunities. In addition, the question might have been interpreted by soldiers to imply that the opportunity to serve would be in the local area, not requiring them to leave home for extensive periods. This suggests that, under the right conditions, many soldiers would be willing to spend additional time to sustain and enhance individual skills. The right conditions could include an approach that encompasses appropriate home-based, and training center/armory based, training strategies for the acquisition and maintenance of individual skills. The strategies could vary by branch, but still allow soldiers to train as close to home as possible and, on their own schedules, to the extent possible. Details about this type of training strategy are discussed next under reclassification and sustainment training.

Problem: Limited MOS Reclassification Strategies

Background

Individual training focuses on both common tasks performed by enlisted soldiers, regardless of MOS, and MOS specific tasks. There is a division of responsibility between the TRADOC school system and the RC unit for providing this training and because of this, two different management systems are involved. TRADOC schools are responsible for Initial Entry Training (IET), [e.g., Basic Combat Training/Advance Individual Training (BCT/AIT) and One station Unit Training (OSUT)] where new soldiers are taught common and basic MOS skills prior to unit assignment. Units are responsible for sustaining these individual skills, and teaching additional skills mandated by the unit mission. Both units and service schools have been responsible for retraining soldiers who change MOSs. IET is managed by TRADOC schools, while skill

TABLE 11
TIME AVAILABLE FOR INDIVIDUAL SKILL TRAINING



WOULD YOU LIKE TO GO ON FULL TIME ACTIVE DUTY FOR THE RESERVE COMPONENT ON A SEASONAL BASIS (2 OR 3 MONTHS OUT OF THE YEAR)?

	yes
---UNEMPLOYED	63%
---SEASONAL/PART-TIME	54%
---FULL TIME STUDENT	52%
---EMPLOYED FULL TIME	37%
AVERAGE	44%

¹
PERCENTAGES EXCLUDE SOLDIERS WHO ARE EMPLOYED FULL-TIME BY THE RESERVE COMPONENT.

sustainment, and training new skills mandated by the mission, is managed by the unit under BTMS. This dual management system can create confusion, particularly where there is overlapping division of responsibility, as is the case in MOS reclassification training for soldiers changing MOS.

TRADOC has made an effort to clarify the division of responsibility between service schools and units by defining "qualification" as those tasks taught to standard by a TRADOC school during IET. In the past, soldiers had to complete, in the unit, additional unit-defined critical tasks, to be considered qualified. Now, soldiers return to their units "qualified" at skill level 1. However, units still retain responsibility for training and sustaining individual unit METL critical tasks which have been identified by the unit, using the BTMS process. These procedural changes now allow TRADOC to be responsible for certifying "qualification".

Reclassification Training Limited to Schools

To date, supervised-on-the-job-training (SOJT) has been the primary method of reclassification training for many MOSs. However, TRADOC has moved in the direction of eliminating SOJT as the primary means of qualifying RC soldiers, who are changing MOSs, at skill level 1 (update to AR 611-201, 1 Sep 86). This indicates that SOJT is the least preferred method for reclassification training. Soldiers changing MOS must either attend the resident TRADOC school or receive the same Program of Instruction (POI) from a school approved source, such as a RF school or ARNG state school. This involves a big change for RC units. In Idaho nearly half of the prior service enlisted soldiers indicated MOS qualification by SOJT (see Table 12).

RC leadership have expressed deep concern about limiting MOS reclassification training strategy to the school environment. Individual skill training was given a top priority as a problem by Idaho leadership in the Senior Leadership Interviews (Appendix E: Tables E-1, E-2, and E-3). However, leaders were not optimistic about traditional school training strategies as solutions to this problem (Appendix E: Table E-4, Solution 1a-1e; Table E-5, solution 1b). Officers and NCOs in the Senior Leadership Interviews rated solutions emphasizing school attendance for qualification lower than solutions to other problems (Appendix E: Tables E-4 and E-5). It is clear that leaders value AC schools (Appendix E: Table E-4, Solution 1d) but consider them an expensive solution to the reclassification training problem. Also, AC schools often cannot accommodate the course length and scheduling requirements of RC soldiers. RF schools are the most likely candidates to fill many of these reclassification needs, since they can secure the resources, already have the mission, and have the ability to meet RC schedules. However, use of RF schools was rated low by RC personnel (Appendix E: Table E-4, Solution 1e). Heretofore, RF

TABLE 12

MOS QUALIFICATION

MOS QUALIFICATION BY:

	AIT/AC SCHOOL	SOJT	OTHER
NON-PRIOR SERVICE	64%	25%	11%
PRIOR SERVICE	33%	49%	19%

school curricula have not been focused on level 1 MOS qualification. To assume this mission effectively, RF schools will need to (a) focus attention and resources on MOS qualification, (b) be able to forecast annual MOS class requirements, and (c) have instructor positions, under a stabilized Table of Distribution and Allowances (TDA), filled by instructors with experience in the MOSs they teach (Army Action Plan for RC Training, Aug 84).

At the present time, two reclassification POIs have been developed by the Armor School for MOSs 19E and 19D (US Army Armor Center, 1986). Both of these POIs are over two hundred hours in length and include many common task topics which have little or no direct application to the tasks involved in becoming either an armor crewman or a cavalry scout. In fact, they simply mirror the Basic/AIT POIs, with little reduction in hours. An individual with prior service, who is transitioning into one of these MOSs, may not need to again undergo training in 12 hours of basic First Aid or 10 hours of NBC. In Idaho, for example, NBC is covered frequently as part of the unit training program. Interestingly, the reclassification POI for 19E includes first aid, but the POI for 19D does not. In any case, it would seem logical to eliminate all subjects from the reclassification POI that are not directly related, and essential, to performing in the new MOS. This would reduce the number of hours of required instruction to the levels which adapt to personal schedules and to the overall RC training environment.

RC units in Idaho are presently planning to use the expertise and administrative capability of their local RF schools to help in presenting the required reclassification instruction, with supplementation by RC full time training NCOs as additional instructors. Since the TRADOC mandated instruction must be accomplished with no extra assets, the Idaho RC must add the requirement to an already overloaded system. It is difficult to visualize a successful program without some additional assets, as well as a broader based training strategy for RC reclassification training.

Causes of Limited Strategies

SOJT Limited

To date, SOJT has been the predominant method of reclassification training for most MOSs for several reasons. Service school courses often do not meet the schedules of RC soldiers in terms of timing and length, enough resources may not be provided for travel and per diem to allow all RC soldiers, who desire to attend, to do so, and, as noted in Appendix A, schools can take soldiers out of their units for long periods of time. Even now, the proportion of training time spent in school, compared to time in the unit, is higher, overall, for RC soldiers than for AC soldiers and tasks taught at school may not always be those most needed to support the unit mission. With elimination

or reduction of SOJT, the amount of time spent away from unit training will increase.

Soldiers can do well on SOJT tasks that are supervised and practiced frequently. This is supported by survey reports of performance on MOS tasks in the highest density, low performance MOSs in Idaho (Table 13). As an overall average, soldiers qualifying at AIT/AC schools report ability to perform 5% to 7% more of the tasks to standard than soldiers qualifying by SOJT. However, the slight overall advantage of attending AC schools is not constant across all tasks, because performance on some tasks favors training by SOJT. Soldier performance is compared, for those who qualified by AIT/AC schools versus SOJT, in Appendix G (Tables G-1, G-2, and G-3). The comparison is made for the three highest density, low performance MOSs (19E, 19D, and 12B), on a task by task basis. The tasks that favor SOJT are those that are supervised and practiced frequently in the unit, and tasks for which the relevant equipment is available in the unit.

School Limited

One reason for limiting MOS reclassification training strategies to school attendance is that unit NCOs, who are responsible for SOJT, have competing unit responsibilities which make adequate supervision of SOJT difficult. Furthermore, unit NCOs are not always qualified to supervise this training, particularly when the MOS that must be trained is a low density one that is different than the MOS of the NCO. This has created concern that adequate, uniform standards of performance are not always achieved with SOJT.

Solution: Flexible MOS Reclassification Strategy

There is no need to limit MOS reclassification training strategy to school attendance or SOJT. There are other and perhaps better strategies that can be tailored to meet RC needs. These can include an eclectic approach involving a mix of traditional and less traditional training methods. The strategy and mix of methods would be tailored to performance requirements, by branch, and would likely be different for MOSs in combat, combat support, and combat service support units.

Performance-Based Standard

Strategies could include the following elements:

1. MOS tasks for reclassification training should have the same standards for RC and AC soldiers. These tasks should be those that are taught to standard for MOSQ at AIT.
2. For both RC and AC soldiers, initial MOS qualification should be based on passing the AIT End-of-Course Comprehension Test (EOCCT), or similar alternative.

TABLE 13

THE EFFECT OF TWO METHODS OF MOS QUALIFICATION ON
 1
 TASK PERFORMANCE

MOS	2 HOW QUALIFIED	
	AIT/AC SCHOOL	SOJT
3 Six MOSs	82	77
Combat Engineer (12B)	83	77
Armored Cavalry Scout (19D)	77	70
Armored Crewman (19E)	81	75

1

There were 20 tasks surveyed in each of six MOSs for a total of 120 tasks. Table entries are percentages of the total number of tasks surveyed that soldiers indicated they could perform to standard.

2

Indicated percentages are only from soldiers who indicated they were MOS qualified.

3

Six high density, low qualification rate MOSs surveyed were 12B, 19D, 19E, 64C, 71L, and 76Y.

Local RF schools could be responsible for administering these tests.

3. Tasks should be standardized and stabilized to the greatest extent possible, within constraints of new equipment and doctrine (see subsequent section on standardizing and stabilizing MOS tasks).

Technology-Based Strategy

If MOS qualification is test based, then where, or how, the soldier acquires the knowledge and skill is less important than the fact of the acquisition itself. This philosophy allows for a flexible strategy, employing technology, which can be used to meet the test requirement.

The basic strategy would be to allow the initial task training to be accomplished by soldiers on their own, either at home or at the training center/armory, without taking up limited and valuable NCO time. Most tasks, even combat tasks, have a cognitive component that can be trained, initially at least, away from the actual equipment. After the initial training, wherever it takes place, soldiers would have to demonstrate task proficiency, hands on with the actual equipment, for their supervisors. Initial learning would occur prior to an IDT and then task competence demonstrated during IDT, thus freeing up much of the time the first line supervisor must dedicate to the initial phase of individual training.

Home-based training. Many tasks could be taught, at least initially, via video taped presentations that soldiers could take home and play on a VCR, on their own time. Video lessons could be based on existing Training Support Packages (TSPs), to the extent possible and video materials adapted for use with EIDS compatible Computer Aided Instruction (CAI). CAI could be employed in Training Centers, Armories, or RF schools.

Soldiers could use their home telephone to ask questions, and get answers, from experts, who could be either unit NCOs or members of a local Training Committee. An automated telephone message system could be employed to allow soldiers to communicate asynchronously between trainee and trainer and between soldiers receiving the same training. Soldiers would need a touch-tone phone and an 800 number to communicate. The system adapts well to RC soldiers' and trainers' schedules.

In selected combat service support units, where unit readiness is often more closely approximated by the sum of the individual skills than is the case in combat or combat support units, a training strategy focusing primarily on home study for MOS reclassification is possible. The program could include mainly home study, with little drill attendance required (MUTA-0). Soldiers could be paid for this home study, but only if they passed the EOCCCT qualification test. This could save considerable travel time and cost.

Training center/armory-based training. Soldiers could be allowed to learn selected tasks through SOJT. Tasks selected for training could be standardized, at least across units which shared a similar METL. The tasks selected should be those that are repeated frequently in the unit environment, those that have equipment available for training, and those for which there are qualified first line supervisors.

Computer Assisted Instruction (CAI), involving EIDS with graphics and video disc, could be used to teach at least some tasks in virtually any MOS. Table 14 shows that soldiers have very limited experience with microcomputers and computer-assisted instruction, but have a very positive attitude toward learning MOS skills using this method.

A task analysis can be used to determine which individual tasks are most appropriate for CAI. Tables 15 through 18, and Appendix H, Tables H-1, H-2, and H-3, provide an "x" next to tasks that would seem to be particularly appropriate for CAI. Some aspects of combat tasks can be taught using CAI. An appropriate part task analysis might be used to identify what can be taught using CAI and what would require hands on experience. With combat tasks, initial CAI training can lead to subsequent hands on experience, as needed.

Although CAI courseware is expensive to develop and can only be justified as cost effective with a large student population, the potential population within the RC is large enough to support this development for some MOSs.

From the unit point of view, MOS courseware for several high density MOSs would be useful and could be developed at different TRADOC schools. Some TRADOC schools have already done this successfully. The TRADOC proponent for such a system would need to insure that an integrated system existed at the unit level, providing compatibility for the hardware and courseware from different schools. Some organization, either the unit or perhaps a RF school, would need to be responsible for maintaining the hardware and instructing students in its use. Someone is also needed to assist students who get confused while using the computer.

With new training strategies, the amount of time soldiers would be required to be away from the unit could be reduced by allowing some instruction to occur within the unit, some to occur at home or in the training center/armory on the soldiers own time, and some to occur in a formal school environment, such as an AC or RF school. However accomplished, reclassification training must be adapted to better meet the needs of the RC training environment.

TABLE 14
TRAINING METHODS

1. HOW DO SOLDIERS USUALLY RECEIVE TRAINING IN YOUR UNIT? (CHECK ONE)

OJT/HANDS ON	82%
LECTURE AND DISCUSSION	8%
GROUP DEMONSTRATION	7%
SELF PACED	2%
SIMULATORS	1%
COMPUTER BASED INSTRUCTION	0%

2. A MICRO COMPUTER IS A PERSONAL OR HOME COMPUTER. HOW MANY MICRO COMPUTERS ARE THERE IN YOUR UNIT?

ONE OR MORE	13%
NONE	46%
DON'T KNOW	41%

3. SUPPOSE THERE WERE A COMPUTER AT YOUR ARMORY THAT HELPED TEACH YOU YOUR MOS OR LET YOU PRACTICE YOUR MOS SKILLS. IF YOU HAD A CHOICE, WOULD YOU USE THIS COMPUTER:

DURING DRILLS?	YES 87%
BETWEEN DRILLS?	YES 69%

4. USING A COMPUTER WOULD INCREASE THE LEVEL OF PROFICIENCY ON MOS TASKS IN MY UNIT.

AGREE	73%
NEITHER	20%
DISAGREE	7%

TABLE 15
COMMON TASKS

(n=1500)

CAN YOU PERFORM THIS TASK?	% NO	CAI
1. PUT ON WEAR, REMOVE, STORE THE PROTECTIVE MASK	3.7	
2. IDENTIFY TERRAIN FEATURES ON A MAP	6.1	X
3. PUT ON AND WEAR MOPP GEAR	6.7	
4. FIND GRID COORDINATES ON A MAP	6.9	X
5. USE A CHALLENGE AND PASSWORD	6.9	X
6. APPLY FIELD DRESSINGS	7.3	
7. MAINTAIN/APPLY IMMEDIATE ACTION/REDUCE STOPPAGE/FIRE M16 RIFLE	7.4	
8. PUT ON A TOURNIQUET	8.0	
9. CAMOUFLAGE YOURSELF AND YOUR EQUIPMENT	9.0	
10. SELECT AND CONSTRUCT AN INDIVIDUAL FIGHTING POSITION	14.3	
11. NAVIGATE ON THE GROUND USING A MAP	15.2	X
12. EMPLOY HAND GRENADES	15.9	
13. MOVE UNDER DIRECT OR INDIRECT FIRE	17.3	
14. RECOGNIZE AND REACT TO CBR ATTACK	18.2	
15. ESTIMATE RANGE	23.7	X
16. MAINTAIN/APPLY IMMEDIATE ACTION/REDUCE STOPPAGE/FIRE THE LAW	24.7	
17. MAINTAIN AND USE AN FM RADIO	26.2	
18. MAINTAIN/APPLY IMMEDIATE ACTION/REDUCE STOPPAGE/FIRE THE M60 MG	30.6	
19. LOCATE MINES BY PROBING	43.5	
20. MAINTAIN/APPLY IMMEDIATE ACTION/REDUCE STOPPAGE/FIRE THE M79 GRENADE LAUNCHER	46.7	

NOTE: AN X IN THE CAI COLUMN INDICATES THE TASK COULD BE TAUGHT USING COMPUTER ASSISTED INSTRUCTION (i.e. VIDEO DISC/GRAFICS).

TABLE 16

COMBAT ENGINEER (12B)
(n=378)

CAN YOU PERFORM THIS TASK?	% NO	CAI
1. MAINTAIN AND USE ENGINEER TOOLS	07.2	
2. INSTALL BARBED WIRE	11.4	
3. LOCATE MINES USING A MINE DETECTOR SET	12.5	
4. INSTALL CONCERTINA WIRE	12.9	
5. DETONATE EXPLOSIVES	19.1	
6. INSTALL ANTI-TANK MINES	19.1	
7. INSTALL ANTI-PERSONNEL MINES	19.4	
8. TIE KNOTS AND LASHINGS	20.0	
9. MAINTAIN AND USE DEMOLITION EQUIPMENT	20.1	
10. OPERATE A GENERATOR	21.3	X
11. IDENTIFY LIMITING SLOPES AND CURVES	25.3	X
12. LOAD AND TRANSPORT EXPLOSIVES	25.4	
13. DETERMINE STREAM WIDTH AND VELOCITY	25.9	X
14. PLACE BREACHING CHARGES	32.9	
15. ASSEMBLE CORRUGATED METAL PIPES FOR CULVERTS	36.2	
16. REEVE SIMPLE TACKLE SYSTEMS	36.3	
17. INVESTIGATE AND CLEAR DEMOLITION MISFIRES	39.5	
18. OPERATE A PNEUMATIC ASSAULT BOAT	47.8	
19. IDENTIFY COMPONENTS OF A BAILEY BRIDGE	52.3	X
20. IDENTIFY COMPONENTS OF A FLOAT BRIDGE	56.3	X

NOTE: AN X IN THE CAI COLUMN INDICATES THE TASK COULD BE TAUGHT USING COMPUTER ASSISTED INSTRUCTION (i.e. VIDEO DISC/GRAFICS).

TABLE 17

CAVALRY SCOUT (19D)
(n=118)

CAN YOU PERFORM THIS TASK?	% NO	CAI
1. MAINTAIN/OPERATE/ENGAGE TARGETS WITH THE M-16	8.8	
2. PREPARE/OPERATE REQUIRED FM RADIO SETS	12.3	X
3. PREPARE FOR NBC ATTACK	12.5	
4. DETERMINE A LOCATION ON THE GROUND BY TERRAIN ASSOC.	13.8	X
5. INSTALL AND OPERATE A FIELD PHONE	16.8	
6. PERFORM PREVENTIVE MAINTENANCE ON BASIC ISSUE ITEMS	17.1	
7. MAINTAIN/OPERATE/ENGAGE TARGETS WITH M203 GRENADE LAUNCHER	20.4	
8. CALL FOR AND ADJUST INDIRECT FIRE	22.8	X
9. MAINTAIN/OPERATE/ENGAGE TARGETS WITH M60 MG	30.0	
10. PERFORM DUTIES AS A ROAD GUIDE	30.7	
11. MAINTAIN AND USE NIGHT VISION GOGGLES	32.0	
12. MAINTAIN/OPERATE/ENGAGE TARGETS WITH 50 CAL MG	34.7	
13. CONSTRUCT AND INSTALL ELECTRIC & NON-ELECTRIC DEMO SYSTEMS	37.4	X
14. COLLECT DATA FOR CLASSIFICATIONS OF A ROUTE	37.8	X
15. EMPLACE/INSTALL/LOCATE/REMOVE MINES AND BOOBY TRAPS	39.6	
16. DRIVE AND PERFORM MAINTENANCE ON THE M113 TRACKED VEHICLE	39.7	
17. USE AN IM-174 SERIES RADIACMETER	54.3	
18. MAINTAIN/OPERATE NIGHT VISION DEVICES, INFRARED EQUIP, BLACKOUT DRIVE ON AN M113 TRACKED VEHICLE	55.4	
19. MAINTAIN/OPERATE/ENGAGE TARGETS WITH THE DRAGON	83.8	
20. MAINTAIN/OPERATE/ENGAGE TARGETS WITH THE TOW	87.0	

NOTE: AN X IN THE CAI COLUMN INDICATES THE TASK COULD BE TAUGHT USING COMPUTER ASSISTED INSTRUCTION (i.e. VIDEO DISC/GRAFICS).

TABLE 18

ARMOR CREWMAN (19E)
(n=99)

CAN YOU PERFORM THIS TASK?	% NO	CAI
1. DRIVE A TANK	17.4	
2. MAINTAIN/APPLY IMMEDIATE ACTION/REDUCE STOPAGES/.45 CAL PISTOL	17.6	
3. PERFORM OPERATORS MAINTENANCE ON BASIC ISSUE ITEMS	20.5	
4. USE HAND AND ARM SIGNALS	21.4	X
5. BORESIGHT THE MAIN GUN	21.6	
6. INSPECT, PREPARE AND STOW AMMUNITION	25.0	X
7. PERFORM REQUIRED CHECKS/SERVICES ON TANK ENG/SUSPENSION/TRACK	25.0	X
8. ESCAPE FROM A TANK	28.2	X
9. PERFORM OPERATORS PM CHECKS/SERVICES/MOUNT APPROPRIATE RADIO	29.6	
10. EVACUATE A WOUNDED CREWMAN	31.1	
11. BORESIGHT AND FIRE THE .50 CAL MG	31.9	X
12. PREPARE A RANGE CARD FOR ALL WEAPONS	32.4	
13. .45 CAL SUBMACHINE GUN	32.5	
14. REMOVE/INSTALL TRACK BLOCKS	32.9	
15. BORESIGHT AND FIRE THE COAX MG	33.0	
16. ENGAGE TARGETS FROM THE GUNNERS STATION WITH THE MAIN GUN	33.7	
17. REPLACE A THROWN TRACK	34.1	X
18. CALL FOR AND ADJUST INDIRECT FIRE	39.8	X
19. USE FLAG SIGNALS	42.0	X
20. TROUBLESHOOT THE FIRE CONTROL SYSTEM	46.6	

NOTE: AN X IN THE CAI COLUMN INDICATES THE TASK COULD BE TAUGHT USING COMPUTER ASSISTED INSTRUCTION (i.e. VIDEO DISC/GRAFICS).

Problem: Individual Skill Sustainment in the Unit

In the survey, enlisted soldiers were asked whether they could perform, to Soldiers Manual standards, 20 skill level 1 tasks in their duty MOS, as well as 20 tasks from the Common Task List. Six MOSs were selected for inclusion on the Survey: Combat Engineer (12B), Cavalry Scout (19D), Armored Crewman (19E), Motor Transport Operator (64C), Administrative Specialist (71L), and Unit Supply Specialist (76Y). These MOSs were selected because they had the largest number of soldiers, and less than an 80% qualification rate, in the Idaho RC. Of the six MOSs, 19E, 19D, and 12B are the Idaho RCs primary combat MOSs. The results of soldier responses to questions regarding their ability to perform common tasks and tasks in MOSs 12B, 19D, and 19E, are shown in Tables 15 through 18. Results of responses to task questions in MOSs 54C, 71L, and 76Y are in Appendix H, Tables H-1 through H-3. Soldiers responded to task questions by indicating whether they could, or could not, perform each listed task, or whether they had never tried. Tasks in the tables are ordered by responses indicating inability to perform ("Can't do" or "never tried"). Many of the hands on, combat relevant, tasks had low performance levels.

Causes of Sustainment Problems

The seven lowest rated tasks for 12B, 19D, and 19E were selected for follow-up interviews with enlisted soldiers in these three MOSs in an attempt to determine why ability to perform these specific tasks was low. Summaries of analyses of information from the interviews are contained in Appendix I, Tables I-1, I-2, and I-3.

A recurrent theme throughout the 19E and 19D interviews was that time constraints made it difficult for all soldiers to practice the large number of qualifying tasks in these MOSs. There seems to be several reasons for this difficulty in sustaining task performance.

1. For 19E and 19D soldiers, there are a large number of tasks to sustain and additional tasks to learn in the unit (Table 19).
2. Additional reasons for poor sustainment can be traced back to training management issues previously discussed, namely lack of dedicated training time for skill level 1 tasks and poor "hip-pocket" training.
3. Shortages of equipment is another common reason for sustainment problems.

For example, for Combat Engineers (MOS 12B), there is an equipment-related performance deficiency in bridging. By Capstone alignment and wartime mission, Idaho RC 12B soldiers should be proficient in basic bridging. However, Idaho lacks bridging assets and Idaho soldiers rarely have the opportunity to practice with the actual equipment in a unit environment. The only place

TABLE 19
SKILL LEVEL 1 TASKS REQUIRED FOR QUALIFICATION
MOSS 19E/19D/12B

SOURCE	TOTAL TASKS	TAUGHT TO STD	INTRO ONLY	UNIT TNG
19E				
Trainers Guide (May, 1984)	112	32 (29%)	35	39
Trainers Guide (Aug, 1986)	123	53 (43%)	--	70
POI (Aug, 1985)	80	67 (84%)	13	--
Soldiers Manual (1982)	110			
19D				
Trainers Guide (July, 1982)	127	60 (47%)	34	33
POI (Jan, 1985)	128	90 (70%)	38	--
Soldiers Manual (1982)	128			
12B				
Trainers Guide (Feb, 1985)	43	31 (72%)		12
POI (Aug, 1984)	38	30 (78%)		--
Soldiers Manual (1983)	33			

Note: Numbers in parentheses indicate the percentage of the total tasks which are taught to standard in AIT, according to the indicated document.

The number of tasks indicated in the taught to standard column, per each POI, are those tasks required for MOS qualification.

1

Taken from the Soldiers Training Publication

soldiers receive significant training in bridging is in TRADOC schools. It is interesting to note that even though the wartime mission indicates that bridging is a critical task, the lack of equipment has tended to cause some 12B soldiers to not consider the bridging mission, and tasks related to it, to be "critical" (Appendix I: Table I-1).

Solution: Additional Study in the Home and/or Training Center/Armory

Based on survey responses, many soldiers indicate a willingness to participate and give additional time, if paid (see Table 11). An individual skill sustainment strategy could involve additional paid study time in the home or in the training center/armory, at a time convenient to the personal schedule of the RC soldier. As with the MOS reclassification training strategy, the sustainment training strategy can be based on test performance. Currently, the RC does not use the Skills Qualification Test (SQT) to qualify individual soldiers but does use it for evaluating training programs. The SQT could be adapted for use by local RF schools, for administration to local RC units, by limiting test items to those MOS tasks which support a unit's METL list. Soldiers would be given individual study materials based on items which they had previously failed or for which they needed additional training. The study materials would be appropriate for home-study or study in the training center/armory. The RC-modified SQT would be readministered at a subsequent time to measure improvements in performance. A soldier's pay for the additional study time could be dependent on passing the test. To the extent that the important tasks are equipment dependent, and have important hands-on components, these aspects could be tested during IDT and AT by the first line supervisor.

With the addition of materials for training unit specific tasks, the study materials created for the individual skills program could be essentially the same as those for the MOS reclassification training strategy discussed previously. For tasks such as bridging, where equipment is rarely available but hands-on training is desirable, models could be used for training on basics so that when soldiers do get the opportunity to train on the real equipment, the training will be more effective. In addition, Ft Belvoir has Plato Computer assisted instruction courseware as part of the Engineer Officer Advance Course (EOAC). The courseware covers a variety of topics including nonstandard fixed bridging. If RC units were interested, that courseware could be delivered to appropriate unit training centers/armories.

Problem: Standardization and Stabilization of MOS Tasks

Armored Crewman (19E), Cavalry Scout (19D), and Combat Engineer (12B), are the three largest and most important combat MOSs in Idaho. RC soldiers in these three MOSs are returning to

their units, after IET, with MOS qualified on their records. In order to determine what each school considers to be MOS qualification (MOSQ) at skill level 1, detailed information about the tasks for these three MOSs was obtained from the Soldier Training Publications (STP), Trainers Guides, and the TRADOC schools POI for each MOS (Table 19).

In all three MOSs, neither the STP, Trainers Guide, or school POI agree on what tasks should be taught to standard for level 1 MOSQ. Whether due to changes in policy, curriculum, lack of coordination, or different revision schedules, the result can be confusion in the field.

It would seem that, in order to avoid confusion regarding MOS requirements, it should be important to standardize and stabilize Soldiers Manual tasks, unless changes are required by new equipment, changes in doctrine, or Force Modernization. The data (Table 19) suggest, however, that changes for some MOSs have been made more frequently than is desirable. Confusion can result when a soldiers' half-completed job book no longer matches the requirements of the relevant STP or Soldiers Manual. MOSQ tasks need to be standardized at a level that can be sustained by RC, as well as AC soldiers, in the training time available to them. Those tasks selected for qualification should be basic, mission relevant ones that are required in the MOS for nearly any wartime mission.

It would also seem to make sense to reduce the number of tasks to be taught solely in the unit, for MOSs with large numbers of tasks, by having the schools train or introduce approximately 80% of the tasks in the STP. This would reduce the number of tasks that must be trained solely in the unit.

Some tasks might be better placed at higher skill levels. For example, 47% of the 19E soldiers indicated they could not "troubleshoot the fire control system". The 1984 Trainers Guide for 19E, indicates that this task is only required at the Advanced NCO (ANCOC) level, and then only by self-study. However, the 1985 POI and the 1986 STP both indicate that the task is taught to standard at AIT. Perhaps, along with other tasks, it should be placed at a higher skill level, thereby reducing the number of level 1 tasks required.

IMPLEMENTATION OF COLLECTIVE TRAINING

Analysis of interview comments on collective/unit training included two areas that soldiers felt needed improvement:

1. Tank gunnery;
2. Realistic tactical training to include effective operation and maintenance of the Multiple Integrated Laser Engagement System (MILES).

Tank Gunnery

Problem Definition

In Table 6, soldiers rated unit performance, including crew-served weapons, favorably, overall. Crew-served weapons performance includes machine gun performance as well as tank gunnery. Based on interview comments, however, soldiers were concerned about tank gunnery performance rather than dismounted machine gun performance. This concern was supported by how soldiers with MOS 19E, Armor Crewman rated their own ability to perform tank gunnery tasks. An important MOS 19E task, required of all soldiers regardless of tank crew position, is "engaging targets from the gunner's station with the main gun". This task was among the lowest rated tasks among those listed for the MOS (Table 18).

Tank gunnery concerns were confirmed by observation of the performance of Idaho ARNG units on Tank Table VIII at AT 1986. The project purpose was not to assess the relative performance of Idaho units compared to other AC and RC armor units, but to assess performance relative to battlefield survival requirements embodied in strict Tank Table VIII standards. Tank Table VIII has very stringent time limits within which tank crews must successfully engage targets. In the AC, frequently, just one in four crews will qualify on the first attempt at Tank Table VIII. However, a majority of AC crews do qualify after a second try. Idaho ARNG performance on Tank Table VIII, during AT 1986, included a wide variability in qualification performance. While a few crews qualified on the first try, most took more than one try, and some took as many as five before qualifying.

In Table 20, crew tank gunnery tasks are broken down to show some essential tasks required of each tank crew position for successful performance on Tank Table VIII. Interviews were held with experienced RC armor subject matter experts in order to identify which tasks shown in the Table represent performance problems that occur often in the conduct of Tank Table VIII. These tasks are noted on column 1 of Table 20. Both the tank commander and gunner must perform tasks that can cause performance problems and, although coordination among all crew members is important, it is particularly so between tank commander and gunner.

Causes

Limited crew practice time for RC soldiers represents the most basic reason for tank gunnery problems. As noted next, there are a variety of factors which contribute to the limiting of crew tank gunnery practice time.

TABLE 20

BASIC CREW TASKS, TANK TABLE VIII ¹	COMMON PERFORMANCE PROBLEMS?	LTID	TASKS TRAINED BY:		
			SCALE FORCE	MODEL	GUARDFIST
The tank commander can:					
1. Select the most important target first. Target identification.	x		x	x	x
2. Lay the main gun on the target.	x	x	x	x	x
3. Engage targets with the Tank Commanders machine gun.		x	x	x	x
4. Identify range to the target effectively.	x			x	x
5. Give correct fire commands.	x	x	x	x	x
6. Fire with a three soldier crew.	x	x	x	x	x
The gunner can:					
1. Lay the main gun precisely on the target.	x	x	x	x	x
2. Use correct target adjustment procedures after a first round miss.	x	x	x	x	x
3. Engage targets with the coaxial machine gun.		x	x	x	x
4. Correctly use secondary sights to engage targets.	x	x	x	x	x
The loader can:					
1. Select/load the proper ammunition.		x	x	x	x
2. Help locate targets.	x	x	x	x	x
3. Follow established safety procedures.		x	x	x	x
The driver can:					
1. Drive, start, and stop smoothly.		x		x	x
2. React to fire commands.	x	x		x	x
3. Locate and attain proper defilade positions.	x	x		x	x
The tank crew can:					
1. Effectively coordinate crew actions.	x	x	x	x	x
2. Boresight the main gun.	x	x			

Note: An "X" indicates "yes" to the column question. Tasks are based on FM 17-12-2 and MOS 19E STP. Tasks must be performed within the short time limits specified by Tank Table 8.

Crew turbulence is one important reason for continual training needs in the area of tank gunnery. Just two months after completing AT 1986, one Idaho unit had only one half of its crews intact. The average annual turnover of 32% creates a constant requirement for continually training individuals in level 1, 19E skills.

There are a number of factors, other than crew turbulence, that work together to limit crew practice time for tank gunnery, and in turn, limit crew performance. Winter weather, limited range availability, minimal ammunition allocations, and less than desirable use of simulators and mini-ranges, all tend to limit crew practice time. In addition, live fire practice often requires considerable travel, range setup, and "waiting in line" for tanks waiting to fire on the range. Therefore, the amount of actual practice time available can be small compared to the total time spent at the range. Furthermore, the division of labor within the tank crew often means that only the gunner and tank commander actually get to fire the main gun. The driver and loader may practice their driving and loading skills, but they get little opportunity for cross training on gunnery skills.

Solutions: Gunnery Simulation Devices

Appropriate use of tank gunnery simulation devices can help to overcome the limitations on crew practice time noted above. Idaho units have some access to the Tank Gunnery Missile and Tracking System (TGMTS), the Mark 60 Conduct of Fire Trainer, and the Gowen Field mini-tank range. These devices can provide some tank gunnery practice time. The available simulators only train a limited range of crew skills for tank gunnery at reasonably high levels of fidelity. For example, the Mark 60 only simulates engaging targets from the gunner's station. In addition, access to simulation devices appears to be limited. Some 33% of the soldiers who responded to the survey said their unit had simulation devices and when asked how the use of these devices could be improved, most wanted increased availability (Table 21).

There are higher fidelity tank gunnery simulation devices that are currently under development (available in the near future) that can be used to increase crew practice time. Three of the possibilities that look like they will be cost effective for RC use are discussed below. These gunnery simulation devices can train a wider range of crew skills than can the currently available devices. Gunnery skills that might be trained by each of these devices are noted in Table 20.

Laser Target Interface Device (LTID). The LTID is mounted on targets and designed to be used with MILES. The device can detect MILES hits and signal the hits by making the targets drop. Since Idaho is in the process of getting its own MILES, the LTID could be used to practice tank gunnery skills at or near home armories. Senior Leadership Interviews favorably rated the development and use of such a device as a solution to crew served

TABLE 21

HOW CAN THE USE OF SIMULATOR TRAINING
DEVICES BE IMPROVED IN YOUR UNIT?

BETTER: (CHECK ALL THAT APPLY)

AVAILABILITY	70%
GUIDANCE ON HOW TO USE SIMULATORS	44%
GUIDANCE ON HOW SIMULATORS FIT IN WITH OTHER TRAINING . .	35%
TRAINING OF TRAINERS ON SIMULATORS	32%
MAINTENANCE OF SIMULATORS	26%

weapons training needs (Appendix E: Table E-4, Solution 11a).

Scale force model tanks. These can be used to realistically simulate enemy fire. This is accomplished by using motorized, radio controlled, one-eighth scale models to maneuver in a fast paced manner. The models provide multiple targets that can be "killed" by soldiers shooting crew-served weapons from inside their tanks using standard MILES gear. These models can provide realistic (simulated force-on-force) practice at or near the home armory. The models also produce both thermal and visual signatures which simulate weapons fire and allows them to be used as targets for night gunnery practice. In addition, the models could be used as targets while tanks are waiting to use a live fire range, thus providing useful practice for refreshing skills. This type of practice, prior to firing Tank Table VIII, could reduce the number of runs required to qualify.

The Guard Unit Armory Device, Full Crew Interactive Simulation Trainer (GUARDFIST). This is a tank appended gunnery simulation system (Smith, Stembler, and Krisak, 1985). GUARDFIST uses available microcomputer and video disc technology to create a full crew interactive tank gunnery simulation. Full crew means that the driver is involved in the simulation as well as other crew members. By pressing the gas or brake, for example, the driver influences the apparent speed of the tank. The tank commander (TC)-driver interaction is simulated in this way, as well as TC-gunner, and TC-loader. The contrast between GUARDFIST and TGMTS is that GUARDFIST is a full crew simulator as opposed to a gunnery simulator only. GUARDFIST is similar in concept and function to the Unit Conduct of Fire Trainer (UCOFT), except GUARDFIST should be less expensive and more accessible to RC units. In time, it may be feasible to provide one simulator to each company sized armor cavalry unit.

Related Armor Problems

Indirect Fire

An important task for MOS 19E, Armor Crewman, and MOS 19D, Cavalry Scout, is "call for and adjust indirect fire". In terms of self-reported proficiency, this level 1 task was particularly low for 19E personnel (Table 18). Soldier performance may be low because soldiers without access to simulators rarely have the chance to practice, since that requires using expensive ammunition in a field environment.

The scale force model, coupled with a sub-caliber device, can be used to simulate indirect fire, thus allowing soldiers to practice, inexpensively, their skills in "call for and adjust indirect fire".

Tow Trainer

The lowest rated task for MOS 19D, Cavalry Scout, involved "engaging targets with the TOW" (Table 17). The reported performance in this task was low because most soldiers had very little opportunity to practice due to (a) the expense of firing real TOW missiles, and (b) lack of TOW trainers. Appropriate units of the Idaho ARNG have now received these trainers. The M16 MILES can be mounted on the TOW trainer and used in conjunction with the LTID, in and around the home armory, to practice engaging targets with the TOW.

Realistic Tactical Training

Problem: Use of MILES

To be effective, tactical training must be realistic and the key to realism is effective use of MILES.

MILES involves laser simulation of weapons fire for a variety of weapons. These include the M16 rifle, the M60 machine gun mounted on a tracked vehicle, and the main gun on the M48/M60 series of tanks. MILES, which is used to measure desired unit performance during field training, is more important to combat units (e.g., armor/infantry) than combat support/service support units since it is directly related to a combat units' primary mission. Soldiers can receive realistic feedback about casualties, caused and sustained, during field training and must execute tasks within the short time constraints found in actual battle. MILES, therefore, provides the means to realistically assess unit performance in the field under simulated battle conditions. However, in order to realistically assess performance and receive realistic feedback, units must:

1. Know how to operate and maintain MILES;
2. Use controllers and umpires to enforce the rules of the game, including insuring that all participants employ functional MILES.

There are performance problems in these areas that detract from realistic tactical training. This assessment is based upon both observation of AT 1986, in Idaho, and analysis of survey responses. Survey question responses regarding unit performance are listed in Table 6 and "operate and maintain MILES" and "realistic use of MILES" are among the lowest rated unit tasks.

Causes

MILES equipment is just being issued to the IDARNG. In the past, any MILES used had to be borrowed from the Training Aids Support Center (TASC), Ft Lewis. This is still true for Idaho USAR units. Because of the lack of equipment, the majority of RC personnel are extremely inexperienced regarding operation and

maintenance of MILES equipment. The NGB, through the Army Training Support Center (ATSC), TRADOC, is putting on a series of schools throughout the country in an attempt to "train the MILES trainer". Idaho ARNG personnel attended one of these schools in June, 1986, at Ft Carson, CO. However, by the time AT 86 arrived for most Idaho ARNG units, the resulting expertise had not yet been exported to the part-time soldier. As a result, MILES, although mounted, was "down" most of the time during ARTEP training. For MILES to be effective, part-time soldiers who are required to use it, must be educated in its use.

Additional MILES Problems

In the MOS and Senior Leadership Interviews, the following difficulties with the use of MILES were noted:

1. It is difficult to keep MILES gear functional during field training exercises without considerable training for the part-time soldier.
2. It can take a considerable period of time to successfully mount MILES on tracked vehicles. For this reason it is difficult to use during IDT weekend training. Selected soldiers must start mounting the equipment on Thursday in order for it to be ready for use by Friday evening.
3. It is often difficult to provide external controllers, and/or umpires, on IDT drill weekends, for the purpose of objectively monitoring field training exercises and furnishing feedback to soldiers after an exercise. If controllers are used at all they are usually personnel drawn from the unit chain of command, who should be participating, rather than acting as controllers. Controllers from an AC source, such as a Mobile Training Team (MTT), may sometimes be used.
4. It can take a considerable period of time to set-up ranges for tank gunnery/crew served weapons firing. Currently, in Idaho, there are no full time range personnel to handle this function. Inexperienced part-time soldiers must either come several days early to set up the range, or have the range set up later while the rest of the part-time soldiers wait.
5. The utility of using part-time soldiers, who are also unit leaders, to spend considerable periods of time doing tasks like mounting MILES, acting as exercise controllers, and setting up ranges, was questioned. While these activities are important to produce realistic training, they do not necessarily represent tasks that are required for combat mission accomplishment.

Administrative Solution: A Training Committee

In the Senior Leadership Interviews, leaders recommended the use of a Range Committee concept to solve the problems noted above (Appendix E: Table E-5, Solution 2d; Table E-4, Solution 7c). It might be better to call it a Training Committee, rather than a Range Committee, since the concept was expanded to include a variety of training functions in addition to setting up ranges. The training Committee could be composed of full time personnel who could be responsible for:

1. Mounting MILES;
2. Acting as external controllers/umpires for MILES exercises during IDT and AT;
3. Setting up and running ranges for tank and crew-served weapons firing;
4. Acting as MOS qualification instructors for soldiers changing MOS.

If companies within a battalion size unit were to schedule drills on different weekends, at least several people from the Training Committee would be available to provide assistance. Productive use of training time might increase as a result. This suggestion was considered extremely valuable by participants in the MOS and Senior Leadership Interviews, but also expensive. Expense, however, is relative. Within the past 10 years, full time personnel have been added to each company size RC unit as part of the Total Force Policy in order to improve RC training. Compared to adding full time personnel to the units themselves, the Training Committee concept is quite efficient.

A Training Committee could be composed of personnel from the AC or various combinations of RC such as, AGR, technician, and part-time soldiers, and be assigned on a TDA to any large headquarters which is in close proximity to a major training area. An excellent source of personnel for this type of mission are the USAR Training Divisions which already have MTOE slots for these personnel. For example, the 104th Division (Tng), Vancouver Barracks, WA, would move the appropriate number of committee positions to the Boise, Idaho area and attach them, for administration and supervision, to either STARC, IDARNG or the 6228th USARF School USAR. These positions would be used to form a Training Committee for the Gowen Field training area. Personnel could be, primarily, part-time soldiers, to fill the part-time MTOE positions of the 104th Division, and be supplemented by the appropriate number of AGR/Technician and AC advisory personnel. Another method, but more costly, would be to simply create a Training Committee TDA, in addition to current authorized manning levels, for each major training area used for RC training.

Technology Solutions

Job aids. Job aids could be created for operating, mounting, and troubleshooting MILES equipment on tracked and wheeled vehicles thereby assisting the part-time soldier to use MILES effectively in the field. For example, the job aid could

show appropriate system connections and checks for mounting MILES on vehicles.

Combined Arms Training Facility (CATF). RC Officers and NCOs have had limited opportunity to observe effective tactical training with MILES, much less receive coaching from experts in the effective use of MILES during ARTEP training.

Gowen Field is creating a Multi-Purpose Range Complex (MPRC) and Combined Arms Training Facility (CATF) which will be similar to the National Training Center (NTC) in terms of instrumentation. It will include capabilities for automated range control and a system for automatic position location identification. The system will involve state-of-the-art technology (e.g., telemetry of player position location) which provides for automatic data collection. It has a battle replay capability, for after action reviews (AARs), and will be able to document "lessons learned". The system will also include some features of automated performance analysis.

The Training at the CATF will involve company/team level exercises, including force-on-force and live-fire in a combined arms (armor, infantry, artillery, aviation) scenario using MILES. The CATF is intended for use by RC units nationwide.

Training strategy to prepare for CATF. In order to make effective use of the CATF, RC units must be prepared to take advantage of the combined arms environment by mastering the prerequisite individual and small unit skills prior to arriving. Units will not receive maximum benefit from the training, and may not be allowed to use the facility, unless they are adequately prepared. Therefore, an effective training strategy needs to be developed that will prepare units for this experience within the time constraints imposed on all RC training. The strategy would be based on a careful performance analysis of unit proficiency followed by a training focus on progression from lower-level individual skills and drills to platoon level proficiency, during IDT (Appendix E: Table E-5, Solution 2f; Table E-4, Solution 7a). The strategy should be based on use of MILES for tank-on-tank and section-on-section drills and could also include tank gunnery practice using realistic simulators. If simulation practice is effective, such a training strategy may not require live fire of Tank Table VIII in preparation for CATF training (Appendix E: Table E-4, Solution 11). In fact, it may be a more effective use of limited training time to focus on high fidelity simulation. Creating and testing an effective training strategy for the CATF ahead of time will enable units to come to the CATF better prepared than those that initially came to the NTC.

Home station training packages could be prepared to help new units get ready for CATF training. These packages would consist of replayable highlights of previous units experience in the force-on-force and live fire environments, examples of

effective tactical performance, as well as documented commonly occurring errors. Training could then be modeled based on what is effective while dropping what is not. Such training packages could be developed for RC units that are now scheduled to go through the NTC.

REFERENCES

Armor Force Mobilization Readiness Task Force (MOBTAF). (1985). Armor force mobilization readiness: Vol. X. RC leader/professional development training. Ft. Knox, KY: US Armor Center

Army Action Plan for Reserve Component Training. (1984). Ft. Monroe, VA: headquarters US Army Training and Doctrine Command (TRADOC).

Bynum, J.A. & Fischl, M.A. (1986, February). Recommendations for "people research and development" actions to improve Army Reserve Component Readiness (Research Report 1427). Alexandria VA: US Army Research Institution for the Behavioral and Social Sciences.

Defense Science Board. (1982, November). Summer study report on training and training technology. Washington, DC

General Accounting Office. (1985, December). Briefing report to the chairman, committee on armed services, house of representatives: alternatives for equipping the Army's Reserve Components. (GAO/NSIDA-86-35BR). Washington, DC

Grissmer, D.W. and Kirby, S.N. (1985, March). Attrition and retention in the Army Reserve and Army National Guard: An empirical analysis (Rand paper P7077). Santa Monica, CA: The Rand Corporation. (DTIC AD A159 561).

Hagman, J.D., Hayes, J.F., Bierwirth, W. (1986, Fall) At the squad through company level, a method for estimating task retention: Research pays off. Army Trainer (1986, February).

Harless, J.H. (1975). An ounce of analysis (is worth a pound of objectives) (3rd ed.). Newman, Georgia: Harless Performance Guild.

Interservice Training Review Organization (1985). Glossary of training terms.

Office of the Assistant Secretary of Defense, Reserve Affairs. (1986, August). Study of longer training programs. Pentagon, Washington, DC.

Reserve Forces Policy Board. (1985). Annual report of the Reserve Forces Policy Board. Office of the Secretary of Defense, Washington, DC.

Smith, G.W., and Hagman, J.D. (1986, November). Reserve Component Training Technology Field Activity. Proceedings of the Eighth Interservice-Industry Training Systems Conference. Salt Lake City, UT.

Smith, G.W., Stembler, W.A., and Krisak, R.W. (1985, November). GUARDFIST: Guard unit armory device full-crew interactive simulator trainer. Proceedings of the Seventh Intervise-Industry Training Systems Conference. Orlando, Florida.

US Army Armor Center. (1982, August). M60A1 Armor Crewman Program of Instruction (19E10-OSUT). Ft. Knox, KY.

US Army Armor Center. (1982, August). Trainers Guide, MOS 19D, Cavalry Scout (FM 17-19D/TG). Washington, DC: Headquarters Department of the Army.

US Army Armor Center. (1984, May). Trainers Guide, MOS 19E, Armor Crewman (STP 17-19E24-SM-TG). Ft. Knox, KY.

US Army Armor Center. (1985, January). M113 Cavalry Scout Program of Instruction (19E10-OSUT). Ft. Knox, KY.

US Army Armor Center. (1985, April). Tank Combat Tables (FM17-12-2). Ft. Knox, KY.

US Army Armor Center. (1986, July). 19D10/10 Reclassification RC (M113/M901). Ft. Knox, KY.

US Army Armor Center. (1986, July). 19E10/20 Reclassification RC (M48-M60A1/A3 Armor Crewman). Ft. Knox, KY.

US Army Armor Center. (1986, August). Trainers Guide, MOS 19E, Armor Crewman (STP-17-19E24-SM-TG). Washington, DC: Headquarters, Department of the Army.

US Army Engineer School. (1984, August). Combat Engineer Program of Instruction (12B10-OSUT). Ft. Belvoir, VA.

US Army Engineer School. (1985, December). Trainers Guide, MOS 12B, Combat Engineer (STP5-12B24-SM-TG). Washington, DC: Headquarters, Department of the Army.

US Army Training Support Center (ATSC). (1985, September). The Army's Individual Training Evaluation Program (AR 350-37) (ATSC Bulletin No. 85-1). Ft. Eustis, VA.

APPENDIX A

BACKGROUND INFORMATION FOR RESERVE COMPONENT TRAINING.

1. AN OVERVIEW OF THE TRAINING ENVIRONMENT
2. RESERVE COMPONENT TRAINING CONSTRAINTS

Overview of the Training Environment

Background

Immediately after World War II, the need for the Reserve Forces was not perceived to be as critical and immediate as it is today. Longer warning times were assumed and the perceived enemy was remote. Funds, equipment, and facilities were limited. For the Guard and Reserve, manning requirements were low, drill attendance and schedules were casual, and trained personnel shortages did not exist. The Guard and Reserve had two weeks of annual training just as today, however, drill attendance differed. In the Guard, there were 48 paid drills of at least two hours each that were held generally on any weekday evening. In the Reserve, different types of units were authorized different numbers of paid drills (Office of the Assistant Secretary of Defense, Reserve Affairs, 1986).

Major changes in the Reserve Forces structure and obligations occurred with the Reserve Forces Act in 1955. The system of 48 paid drills, in the form of four one-half day Unit Training Assemblies (UTAs) was established at this time. In 1967, a minimum of 14 days Annual Training (AT) was established. The requirement that nonprior service personnel who enlist in the Reserve Forces take Basic Combat Training (BCT) and Advanced Individual Training (AIT) at Active Duty installations stems back to the Reserve Forces Act of 1955 (Office of the Assistant Secretary of Defense, Reserve Affairs, 1986).

Total Force Policy

A major change in Reserve Component policy occurred in 1970 when Secretary of Defense Melvin Laird laid the groundwork for the Total Force Policy. The implementation of the policy was announced in 1973 by Secretary of Defense James R Schlesinger, Jr.. Reserve Component Forces were to become the first and primary augmentation of the Active Component, with increased roles and responsibilities. They no longer could be considered a force to augment the AC after long preparation, but must be a viable partner, available immediately, to resist rapidly deployed threats. The Total Force Policy means RC units must be prepared to fight as units after mobilization without a great deal of predeployment training time. It is for this reason that there is emphasis at higher echelons to train effectively as units, and especially so for combat units.

The concept of "Round Out" units was created as part of the new policy in which RC units are used to fill out the structure of AC divisions. Four of the Army's 16 divisions have one third of their combat power in the RC as Roundout units (Office of the Assistant Secretary, Reserve Affairs, 1986).

As part of this policy, the Army implemented the Capstone program in 1979 to help the RC focus its training based on

wartime contingency plans. The program provides wartime contingency plans to each unit and provides chain of command, likely area of deployment, and likely deployment time frames.

The Total Force Policy led directly to increasing the number of full time civilian technicians and soldiers assigned to RC units to help cope with increased responsibilities, and many full time personnel are now serving in Active Guard/Reserve (AGR) status. At the company level there may be as many as four full time personnel assigned to assist with (1) administration, (2) training, (3) maintenance, and (4) supply, respectively. For example, in the 321st Engineer Battalion (USAR, Idaho), each line company has full time personnel in each of these four positions, while Idaho ARNG units have full time personnel in administrative and training positions, with full time maintenance support in separate units.

The Total Force Policy has produced a big increase in RC responsibilities, placed increased emphasis on collective training, and produced increases in the availability of equipment and facilities, particularly in recent years. Although there have been some increases in time, particularly for school training in individual skills, and some increase in collective training, such as the occasional use of three week annual training periods for National Guard units, time available for training still remains limited. However, a recent study (Office of the Assistant Secretary, Reserve Affairs, 1986) has indicated that the time that can be given to RC training is nearing an upper limit for many RC soldiers. In FY 1985, officers in the Army National Guard averaged 73 days of paid time, and those in the Army Reserve, averaged 55 days. Enlisted soldiers in the Guard and Reserve averaged 55 and 50 days of paid time respectively. Senior NCO time in both components is similar to that of officers. In addition, officers and NCOs often put in considerable amounts of unpaid time in training planning and preparation (see Table 7).

The Total Force Policy has produced an increase in responsibilities without a corresponding increase in training time, and one byproduct of that policy is increased competition over how the scarce training time is to be used.

The competition over how time is to be used shows up in a number of areas, but is nowhere more pronounced than the competition between individual skill training and collective training. Initial individual skill training frequently occurs, initially, in a Service School environment away from the unit. For enlisted soldiers, this training can be done in lieu of attendance at AT and/or IDT with the unit. For example, in a recent study, the typical training history of an RC enlisted soldier with an Armor (19E, 19D) MOS was projected over an eight year period (Armor Force Mobilization Readiness Task Force, Vol. X, 1985). Assuming the soldier was promoted to staff sergeant (E6) during this period, this individual would spend 19% of

available drill time, at school, away from the unit, and 6 out of 8 annual training periods, out of the unit, at mandatory schooling. Normally enlisted soldiers are unable to be away from the unit for this length of time, and must put in considerable additional time to meet their schooling requirements. By contrast, the corresponding AC enlisted soldier, attending longer full-length AC school courses, would only spend 8% of an eight year career in school. Furthermore, during school attendance, the AC soldier does not have dual responsibilities in the home unit as well as at school, as does the RC soldier. If the training history of an RC Armor Officer, promoted to Captain, is projected over an eleven year period, it shows that this individual must add the equivalent of 30% additional drill time and 6 additional AT periods to accomplish mandatory professional development training. Officers, for the most part, cannot do this additional professional development training in lieu of attendance at unit AT and drills. By comparison, an AC Officer will spend about 12% of the time at the longer, full length, AC school. During this time, this individual will not have home unit responsibilities as does the RC Officer (Armor Force Mobilization Readiness Task Force, Vol. X, 1985). In summary, although courses are shorter, RC soldiers spend a much higher proportion of their military career time in formal school training. In earlier years, time away from units, at schools, was not seen to be as much of a problem as it is today, due to implementation of the Total Force Policy with its additional emphasis on unit training.

The conflict between unit and individual skill training is not limited to schools and soldier time away from units, but also extends to how time is spent during weekend drills and annual training. What time, emphasis, and priority should be given to individual skill training for the sustainment of old skills and the acquisition of new ones, and what should be given to unit training? The army views both kinds of training as important. How to manage both kinds of training effectively in an RC unit training environment, with limited time, in a way that maximizes readiness is an important issue.

The Total Force Policy mandates the post-mobilization integration of Active and Reserve Components. Integration of both components is important due to the size of the Reserve Forces. Some 48 percent of the soldiers in the total Army are in the Selected Reserve. The Reserve Component contributes to the Army, 51% of the combat force structure, 67% of the combat support structure, and 91% of the combat service support.

How the Reserve and Active Forces are integrated has implications for training. If the forces are integrated at the large unit level, as dictated by the Total Force Policy, then RC training through the battalion level is essential, particularly for combat units. The possibility that forces will be integrated at the large unit level is one reason why there is pressure for combat units to train at higher echelons (e.g., company, battalion level training).

Reserve Component Training Constraints

The RC training environment imposes additional constraints on effective individual and collective training. Although the RC of the Army is large, consisting of 3350 ARNG units and 3438 USAR units, totaling 48% of the Total Army in uniform, the locations of RC soldiers and units are geographically dispersed, particularly in the West. In Idaho, units from the 2/116th ACR are separated up to 350 miles. Units in the 116th Engineer Battalion are separated up to 525 miles, and units from the 321st Engineer Battalion (USAR) are separated up to 450 miles. Nationwide, the Combat Engineer MOS, 12B, can be found at only 23 sites in the AC, but is found at 137 sites in the RC. Counting separate detachments, the combat engineer MOS, alone, can be found at 16 sites in the Idaho RC. Additionally, at each of the geographically dispersed units, one can generally find a variety of different MOSs since virtually every branch and MOS is represented in the RC. In Idaho, unit Table of Organization and Equipment (TOE) structure calls for over 140 different MOSs, and often, there are only a few people at each location with a given MOS. Obviously, individual skill training can be difficult in this situation.

Although important for the conduct of collective training, RC access to Local (LTA) and major (MTA) Training Areas is limited. Nearly 66% of RC units must travel more than 2 hours just to get to their local training areas, and 54% of RC units must travel more than 6 hours to get to the nearest major training area (Smith and Hagman, 1986). Thus, travel time, to some degree, competes with training time.

In addition to distant training sites, lack of appropriate equipment for training is often a problem. Equipment may be either unavailable or outmoded. Attempts have been made to solve the problem in the context of the Total Force Policy. In 1982, the "First to Fight, First to Equip" policy was initiated and resulted in an influx of more modern equipment into the RC. Although equipment availability has increased, large shortfalls still exist and require continuing attention (Reserve Forces Policy Board, 1985). For example, equipment shortages account for more than 90% of the RC units that are classified as not combat ready under a European war scenario (Government Accounting Office, December, 1985).

The RC presents a training environment characterized by limited time, training sites, and training equipment (Defense Science Board, 1982). Advanced training technology, including the use of low cost simulators and remote delivery strategies, may make a difference in meeting the difficult training challenges presented.

APPENDIX B

AN OUTLINE OF PROBLEMS, CAUSES, AND SOLUTIONS.

General Problem: Wasted Training Time

I. Specific Problem: Training Planning Needs Improvement

A. Causes:

1. Planning is decentralized (by contrast to planning in schools)
2. Planning is complex. Must answer:
 - a. Who (echelon)
 - b. What (content)
 - c. When and where (scheduling)
 - d. Why.
3. Planning reference material is not concise.
4. Multiple units and leaders.
5. Some leaders inexperienced in planning.

B. Technology Solution:

1. Provide concise manual for the RC on how to do training planning, including examples of how to answer the who, what, when and why questions in the RC.
2. Provide computer-automated job aids for training planning which would provide step-by-step prompts. Reference material (e.g., mission by prerequisite individual task matrices) could be in databases. Skill decay data for tasks would be added. Prompts would be provided where training planning is weak:
 - a. Dedicated time for NCOs,
 - b. Progressive training,
 - c. Realistic prioritization of tasks,
 - d. Hip-pocket training,
 - e. Training accountability.
3. Provide a Relational Data Base Management System (RDBMS) for management of paperwork and reference material.

II. Specific Problem: Frequency of hip-pocket/opportunity training is low.

A. Causes:

1. Planning hip-pocket training is difficult (who, what, when).
2. Accountability for hip-pocket training is low.
3. Lack of consolidated reference material designed for the hip-pocket environment.

B. Technology Solution:

1. Computer automated training planning system would provide prompts for hip-pocket training scheduling, and assignments of NCOs to be held accountable for hip-pocket training.
2. Walkman audio recordings with visuals on cards could be used as job aid reference material designed specifically for the hip-pocket environment. These job aids could be developed for "critical", low-performance tasks for 12B, 19E, 19D MOSs.

MOSs 12B, 19E, 19D Reclassification Training

General Problem: Acquisition of individual skills for soldiers changing MOSs.

I. Specific Problem: Restricted training strategies for MOS reclassification training.

A. In the past reclassification training often limited to SOJT.

B. Currently reclassification training may be limited to AC or RC school training.

II. Causes:

In the past, reclassification training was often limited to SOJT because:

A. Schools do not meet RC soldiers' schedules in terms of timing and length.

B. Schools take soldiers out of units for long periods of time.

C. Resources may not be provided to attend schools.

D. Soldiers can do well on SOJT tasks that are supervised and practiced frequently in the unit.

In the future, reclassification training may be limited to school training because:

A. Unit NCOs have competing responsibilities that make reclassification training difficult.

B. Unit NCOs may not always be qualified to provide reclassification training for low density unit MOSs.

C. Uniform standards of performance may not be maintained with SOJT.

III. Technology Solution: A new strategy for MOS reclassification training can be developed that meets the requirements of AR 611-201 and meets the needs of RC soldiers.

A. Reclassification training to have the same standards for RC and AC soldiers (i.e., based on MOS tasks taught at AIT).

B. Tasks should be standardized and stabilized to the extent possible.

C. "Qualification" to be based on passing the AIT End-of Course-Comprehensive Test (EOCCT).

D. A flexible strategy employing technology can be used to train for this test requirement.

1. Initial task training to be home-based, with subsequent supervised hands-on training/testing during IDT and AT.

2. Home-based training to be based on video cassette (VCR) tapes. Video tape scripts could be based on existing Training Support Packages (TSPs) to the extent possible. Video materials could be adapted to EIDS compatible CAI.

3. Soldiers could use the telephone at home for questions and answers. An automated telephone message system could allow questions and answers to operate asynchronously to match RC soldiers' and trainers' schedules.

4. EIDS CAI could be employed at training centers/armories.

5. USARF Schools could teach portions of the course and/or provide trained instructors to support unit SOJT segments that are equipment intensive.

6. Instructors from a training committee might be available to help support unit SOJT.

7. EOCCT test to be administered by USARF School and/or first line supervisors.

MOSs 12B, 19E, 19D

General Problem: Weak sustainment of MOS Skills in the Unit

I. Causes:

- A. Limited time for training.
- B. Lack of equipment (e.g., bridging equipment for 12B).

II. Solution: Provide home study in MOS skills:

- A. Many soldiers indicate a willingness to participate and give additional time if paid.
- B. Use SQT to identify "METL critical" tasks on which soldiers are weak.
- C. Use home study video cassette (VCR) tapes developed for reclassification training to train soldiers on weak skills.
- D. Use EIDS CAI at training centers/armories. Can use many of the same materials that were developed for reclassification training.
- E. Pay dependent on passing SQT test.
- F. Like AC, consider making promotion dependent upon passing SQT (RC critical tasks only).
- G. Provide hands-on component to training at IDT, or AT. For tasks without equipment, employ models (e.g., model bridges for 12B).

MOS 19E

General Problem: Tank Gunnery crews can take five tries to pass Table VIII during AT.

Specific Problem: Armor crews cannot engage targets from the gunner's station with the main gun.

A. Causes:

1. Practice time
2. Crew turbulence
3. Weather conditions
4. Limited range availability
5. Minimum ammunition allocations
6. Travel
7. Range set up time

B. Technology Solution

1. Laser Target Interface Device
2. Scale Force Model Tanks and Helicopters
3. GUARDFIST

Problem: Armor crews cannot call for and adjust indirect fire

A. Causes: Lack of practice because ammunition is too expensive.

B. Technology Solution:

1. Scale Force Models, and
2. Subcaliber device.

Together they can provide inexpensive practice.

General Problem: Unrealistic Tactical ARTEP Training

I. Specific Problem: Employment of MILES

A. Low capability for operating and maintaining MILES,

B. Infrequent use of controllers to appropriately control MILES exercises.

II. Causes:

A. MILES is new to IDARNG.

B. For USAR units, MILES must be borrowed.

C. Part-time soldiers have not yet received much training in the operation and maintenance of MILES.

D. Part-time soldiers have not had the opportunity to observe effective tactical training with MILES.

E. MILES set up is time consuming.

III. Administrative Solution: Training Committee -- Full-time personnel on a committee to fulfill time consuming training preparation and control functions:

A. Act as controllers for MILES exercises.

B. Mount MILES on tracked and wheeled vehicles ahead of IDT and AT ARTEP training.

C. Act as Mobile Training Team to teach part-time soldiers how to maintain MILES in the field.

D. Assist unit NCOs with MOS reclassification and sustainment training upon request.

IV. Technology Solution 1: Provide job aids for mounting and troubleshooting MILES equipment on tracked and wheeled vehicles for use by part-time soldiers.

V. Technology Solution 2: Preparation of an effective training strategy for the Combined Arms Training Facility (CATF), Gowen Field, Idaho. This NTC-like training facility will be used for RC units nationwide. It will include instrumentation for replaying performance and for assisting after action reviews. It will allow RC soldiers to observe effective tactical performance. A training strategy for effective performance at CATF can be developed including (1) use of tank gunnery simulators, and (2) effective use of MILES at low echelons during IDT.

APPENDIX C
IDAHO RESERVE COMPONENT SURVEY RESPONSES

APPENDIX: C

FOR
OFFICE
USE
ONLY
6

1. Are you in the Army National Guard (ARNG) or in the US Army Reserve (USAR)? (Check one.)

80 (2) ARNG 20 (1) USAR (2196)

2. How long have you served in the Reserve Component? (Write the number in the blank.)

7.8 mean 7.8 Years (2096)

3. Are you employed full time by the Reserve Component? (e.g., technician, Army Guard/Reserve)

9 15.9 (2) Yes 84.1 (1) No (2194)

4. Have you ever served in the Active Component?

10 45.1 (2) Yes 54.9 (1) No (If no, go to question 5) (2169)

a. If yes, was it in the Army?

11 66.9 (2) Yes 34.0 (1) No (1052)

b. How long did you serve in the Active Component?

3.8 (5) Over 10 Years

17.5 (4) 5 -- 10 Years

45.9 (3) 3 -- 4 Years

18.6 (2) 1 -- 2 Years

14.1 (1) Less than 1 year

12 5. What is your rank? (Check one.)

5.5 E1 23.8 E5 .5 E9 1.6 O1

7.2 E2 13.2 E6 3.0 WO 1.0 O2

8.6 E3 5.0 E7 2.4 O3

23.5 E4 1.8 E8 1.6 O4

13 1.1 O5

6. What is the highest level of education you have completed. (Check one.)

4.2 (1) Elementary School

38.8 (2) High School Diploma or equivalency

41.3 (3) Some college or technical school

9.0 (4) Four years of college/university

3.4 (5) Some graduate school

3.4 (6) Graduate degree

7. How many people live in the city, town or rural area where you live? (Check one.)

FOR
OFFICE
USE
ONLY
15 6.8(1) less than 1,000
 26.1(2) 1,000 -- 10,000
 34.2(3) 10,000 -- 50,000
 30.2(4) 50,000 -- 250,000
 2.8(5) more than 250,000

8. Do you have a civilian job? (Include full time military technician or Active Guard Reserve.)
If not, go to question 8d.)

16 81.3(2) Yes 18.7(1) No

a. Is your civilian job:

17 80.6(3) Full time 13.0(2) Part-time 6.4(1) Seasonal

b. Do you get vacation time plus time off for annual training?

18 66.1(2) I get both 33.9(1) I use my vacation time for annual training

c. Does your employer pay you during time off for annual training?

19 34.4(2) Yes 65.6(1) No

d. Are you currently a student at a college/university?

20 11.4(3) Full time 8.6(2) Part-time 80.0(1) Not a student

9. Do you have any dependents (spouse and/or children)?

21 65.7(2) Yes 34.3(1) No

10. What is your duty MOS? (For officers, provide DSSI)

22 (Number) 12B(395)/19D(115)/19E(74)/64C(68)/94B(65)/63B(58) (Title)

11. Does your duty MOS match your civilian job?

23 21.5(2) Yes 78.5(1) No

12. Are you MOS qualified at skill level one in your duty MOS?

24 79.6(2) Yes 20.4(1) No (If no, skip to question 13.)

FOR
OFFICE
USE
ONLY
25
a. If qualified, how long ago did you get your qualification?

15.6 (5) 9 Years or more
24.4 (4) 4 to 8 years
33.2 (3) 1 to 3 years
19.7 (2) 3 months to 1 year
7.2 (1) Less than 3 months

26
b. If qualified, were you qualified during active duty or while in the reserves?

29.6 (2) During Active Duty 70.4 (1) While in the Reserves

c. How did you get your duty MOS qualification? (Check one.)

36.3 (1) Advanced Individual Training (AIT)
34.5 (2) On-the-Job Training (OJT)
6.3 (3) Skill Qualification Test (SQT)
1.8 (4) Commander's decision
14.6 (5) Active Duty School
3.5 (6) National Guard School
2.9 (7) Correspondence courses

27
13. About how many hours per month do you spend working/training in your duty MOS? (Write the # of hours in the blank.)

28,29
mean 19.1 Hours

14. Do you find it difficult to learn and maintain MOS skills at the required levels of proficiency?

30
38.6 (2) Yes 61.4 (1) No (If no, skip to question 15.)

b. If yes, why? (Check all that apply.)

31
32
33
34
35
36
37
38
39
40
41
42
43
a. Not enough training in my MOS
b. Not enough equipment
c. Inadequate training areas
d. Not enough training materials
e. Inadequate training materials
f. Not enough simulators and training devices
g. Wasted training time
h. Wrong equipment
i. Can't get to training areas
j. Unprepared instructors
k. Unqualified instructors
l. Other, list:

c. Look at the factors that you checked for the previous question (14b). Which one is most important?

44
E/B/L Write the letter here.

15. Suppose there were a computer at your Armory that helped teach you your MOS or let you practice your MOS skills. If you had a choice, would you use this computer:

a. During drills?

45. 87.4(2) Yes 12.6(1) No

b. Between drills?

46. 68.8(2) Yes 31.2(1) No

c. Using a computer would increase the level of proficiency on MOS tasks in my unit. (Check one.)

47. 29.6(5) 42.9(4) 20.5(3) 4.8(2) 2.2(1)
Strongly Agree Neither Disagree Strongly
Agree Agree/Disagree Disagree

NOTE: QUESTIONS 16 AND 17 APPLY TO ENLISTED SOLDIERS ONLY. OFFICERS SKIP TO QUESTION 18.

16. How many tasks have you ever performed (to standard) from the soldier's manual for your duty MOS?

48. 21.7(5) All 39.9(4) More than 1/2 18.8(3) About 1/2
11.6(2) Less than 1/2 8.0(1) None

17. Have you ever taken a Skills Qualification Test (SQT) in your duty MOS?

49. 55.2(2) Yes 44.8(1) No (If not, skip to question 18.)

a. If yes, how many months ago?

50, 51. Med: 10 Months

b. Were you considered MOS qualified based on your SQT score?

52. 71.6(2) Yes 28.4(1) No

18. Soldiers should go to drills only if their duty MOS is being trained.

53. 7.0(5) 10.9(4) 15.3(3) 33.5(2) 33.3(1)
Strongly Agree Neither Disagree Strongly
Agree Agree/Disagree Disagree

19. Soldiers in our unit need more time to train on individual common tasks.

54. 18.0(5) 44.4(4) 25.3(3) 10.0(2) 2.2(1)
Strongly Agree Neither Disagree Strongly
Agree Agree/Disagree Disagree

FOR
OFFICE
USE
ONLY
55

20. Soldiers in our unit need more time to train on individual MOS tasks.

28.1 (5) 49.0 (4) 18.8 (3) 3.4 (2) 7 (1)
Strongly Agree Neither Disagree Strongly
Agree Agree/Disagree Disagree

21. What was your last qualification with your basic weapon? (Choose one.)

56 33.9 (5) Expert 33.0 (4) Sharpshooter 24.5 (3) Marksman
2.2 (2) Unqualified 6.4 (1) Never tested

a. If unqualified, indicate why. (Check the most important reason.)

34.6 (4) I haven't learned this skill
3.3 (3) I'm not interested
53.8 (2) I've had little opportunity to shoot
8.2 (1) I've changed basic weapons

57 22. In your current job assignment, how many of the tasks described in the soldiers manual for your duty MOS are you required to perform?

58 51.9 (5) 13.8 (4) 14.1 (3) 8.2 (2) 12.0 (1)
10 or more 7--9 4--6 1--3 None

59 23. Regardless of what the official records show about your MOS qualification, can you perform most of the important duties required by your duty MOS?

60 59 86.9 (2) Yes 13.1 (1) No

61 24. a. Overall, I would rate the performance of my unit during field training exercises as:

18.3 (5) Outstanding
38.6 (4) Excellent
35.5 (3) Satisfactory
6.1 (2) Marginal
1.5 (1) Unsatisfactory

b. Rate the performance of your unit on how well soldiers employ and shoot their crew-served weapons.

In this area, my unit is:

11.5 (5) Outstanding
31.8 (4) Excellent
45.4 (3) Satisfactory
8.1 (2) Marginal
3.2 (1) Unsatisfactory

62 25. In my unit, field training exercises are realistic.

8.5 (5) 43.0 (4) 30.2 (3) 13.8 (2) 4.5 (1)
Strongly Agree Neither Disagree Strongly
Agree Agree/Disagree Disagree

FOR
OFFICE
USE
ONLY
63

26. More than half of the tasks on the Mission Essential Task List (METL) for our unit are done to standard.

8.2 (5) 51.7 (4) 35.0 (3) 4.8 (2) .4 (1)
Strongly Agree Neither Disagree Strongly
Agree Agree/Disagree

64

27. Our unit has too many required tasks on the Mission Essential Task List (METL).

2.7 (5) 13.2 (4) 62.0 (3) 19.6 (2) 2.4 (1)
Strongly Agree Neither Disagree Strongly
Agree Agree/Disagree Disagree

65

28. Given the current system, is it difficult for your unit to attain and maintain required levels of unit readiness?

46.6 (2) Yes 53.4 (1) No (If no, go to question 29.)

a. If yes, which of the following contribute to this difficulty? (Check all that apply.)

66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82

53.6 Not enough training time
37.4 Not enough training equipment
14.2 Wrong equipment
23.5 Poor training areas
15.8 Officers poorly trained
10.0 NCO's poorly trained
39.0 Training time wasted
45.0 Lack of communication
19.3 Training areas too far away
41.9 Too much paperwork
9.4 Unqualified instructors
34.2 Poor planning
13.3 Instructors are not well prepared
11.7 Too many poor performers in the unit
35.0 Not enough simulators and training devices
22.4 Not enough training materials (training aids, FM's, TM's)
9.8 Other, list: _____

29. Rate the performance of the next higher headquarters on the extent to which they (a) provide realistic and timely guidance and objectives; and (b) provide necessary assistance and support for training. Their performance is:

4.2 (5) Outstanding (2067)
15.7 (4) Excellent
52.9 (3) Satisfactory
20.5 (2) Marginal
6.7 (1) Unsatisfactory

83

a. If marginal or unsatisfactory, indicate why. (Check the most important one.)

37.3 (3) They don't know how (679)
33.7 (2) They lack desire/motivation
29.0 (1) They lack facilities, equipment, training areas, time, resources to help

30. Rate the ability of your unit to conduct sustained operations/support missions. Does your unit demonstrate the ability to operate in a field environment over extended periods, (like two weeks) or "around the clock" with the resources on hand?

In this area, my unit is:

15.9(5) Outstanding (2080)
33.4(4) Excellent
40.2(3) Satisfactory
8.0(2) Marginal
2.5(1) Unsatisfactory

85

a. If marginal or unsatisfactory, indicate why. (Check one.)

22.8(3) Unit members haven't learned how (307)
28.0(2) Unit members lack desire/motivation
49.5(1) Unit lacks equipment, training areas, resources, etc.

86

31. MILES gear provides laser simulation of weapons fire. Does your unit use MILES gear for unit field training?

87

27.8(2) Yes 72.2(1) No If no, go to question 32. (2026)

a. Do soldiers in your unit know how to operate and maintain MILES gear?

In this area, the performance of my unit is:

5.6(5) Outstanding (838)
15.2(4) Excellent
39.7(3) Satisfactory
17.7(2) Marginal
21.8(1) Unsatisfactory

88

b. How well is MILES gear used to realistically simulate battle? For example, are the following standards met? The rules of the game are enforced by controllers who make sure casualties are correctly counted. Soldiers do not play unless they have MILES gear that allows them to shoot and be shot.

In this area, the performance of my unit is:

7.4(5) Outstanding (836)
18.7(4) Excellent
39.1(3) Satisfactory
14.5(2) Marginal
20.3(1) Unsatisfactory

89

32. Rate the performance of your unit on the use of camouflage techniques. Are proper camouflage techniques used throughout all tactical operations? In this area, my unit is:

14.7(5) Outstanding (2022)
27.6(4) Excellent
42.1(3) Satisfactory
11.4(2) Marginal
4.2(1) Unsatisfactory

90

FOR
OFFICE
USE
ONLY
91

a. If marginal or unsatisfactory, indicate why. (Check one.)

28.3(3) Unit members haven't learned how (438)

28.5(2) Unit members lack desire/motivation

43.2(1) Unit lacks equipment, training area, time, etc.

33. Rate the performance of your unit on radio commo operations
Can your unit establish, operate, and maintain authorized
communication systems using authorized procedures?
In this area, the performance of my unit is:

10.5(5) Outstanding

28.0(4) Excellent

45.1(3) Satisfactory

(2023)

12.0(2) Marginal

4.3(1) Unsatisfactory

92

a. If marginal or unsatisfactory, indicate why. (Check one.)

36.4(3) Unit members haven't learned how

11.5(2) Unit members lack desire/motivation

93

52.4(1) Unit lacks equipment, training area, time, etc.

34. Rate the performance of your unit on operator maintenance
during field training exercises. Do unit personnel
properly maintain and effectively operate authorized equipment?
In this area, the performance of my unit is:

14.6(5) Outstanding

34.8(4) Excellent

42.5(3) Satisfactory

(2021)

6.3(2) Marginal

1.8(1) Unsatisfactory

94

a. If marginal or unsatisfactory, indicate why. (Check one.)

24.0(3) Unit members haven't learned how (217)

47.0(2) Unit members lack desire/motivation

95

29.0(1) Unit lacks equipment, training area, time, etc.

35. There are a variety of things you must know if your unit is
mobilized. Some of these things are listed below. Check all
items on the list you don't know about.

96

22.9 Location of my unit's mobilization station

97

43.1 Location of my unit's alternate assembly area

98

21.8 Who notifies me in the event of an alert

99

31.9 Who I notify in the event of an alert

100

53.8 How to prepare mobilization paperwork for my family

101

32.5 My units wartime mission

36. Unit field training is interesting in my unit.

12.7(5) 48.0(4) 28.1(3) 7.3(2) 3.8(1) (2063)
Strongly Agree Neither Disagree Strongly
Agree Agree/Disagree Disagree

102

37. Rate your unit on productive use of the full training day for each soldier. Is each soldier kept in a learning or teaching situation throughout each training period and/or exercise?

In this area, my unit is:

6.4 (5) Outstanding
22.2 (4) Excellent
52.8 (3) Satisfactory (2123)
14.2 (2) Marginal
4.4 (1) Unsatisfactory

103

a. If marginal or unsatisfactory, indicate why. (Check one.)

21.7 (3) Leaders/trainers haven't learned how (419)
34.1 (2) Leaders/trainers lack desire/motivation
43.9 (1) Unit lacks equipment, training areas, resources, etc.

104

38. Rate your unit on how well training is supervised during field training exercises. Do all unit leaders set objectives, provide resources, coach subordinates, and measure results?

In this area, my unit is:

10.4 (5) Outstanding
30.2 (4) Excellent
48.8 (3) Satisfactory
8.7 (2) Marginal
1.8 (1) Unsatisfactory

105

a. If marginal or unsatisfactory, indicate why. (Check one.)

32.4 (3) Leaders/trainers haven't learned how
37.9 (2) Leaders/trainers lack desire/motivation
29.7 (1) Unit lacks equipment, training areas, resources, etc.

106

39. During field training exercises, individual and unit training should be effectively combined. First line supervisors are supposed to identify weakness in individual performance, and enlisted soldiers are supposed to train on their areas of weakness at every opportunity when not actively taking part in unit training. Rate how well your unit combines individual and unit training.

7.1 (5) Outstanding
24.9 (4) Excellent
55.3 (3) Satisfactory (2052)
10.3 (2) Marginal
2.4 (1) Unsatisfactory

107

a. If marginal or unsatisfactory, indicate why. (Check one.)

34.1 (3) Unit/members haven't learned how (299)
37.5 (2) Unit lacks desire/motivation
28.4 (1) Unit lacks equipment, training, training areas, etc.

108

FOR
OFFICE
USE
ONLY

109

40. Short notice changes to training schedules waste a lot of training time.

28.5 (5) 38.7 (4) 23.5 (3) 7.5 (2) 1.8 (1)
Strongly Agree Neither Disagree Strongly Agree Agree/Disagree Disagree

110 41. How often does your training schedule change? (Check one.)

24.3 (5) More than five times per year
13.5 (4) 4--5 times per year
39.7 (3) 2--3 times per year (2124)
17.0 (2) One per year
5.5 (1) Never

111 42. Is the time you spend in training always during drills and Annual Training?

60.9 (2) Yes 39.1 (1) No If yes, go to question 43. (2002)

a. If not, how many extra hours do you usually spend in training per month outside of drill time and annual training?

112,113 Med: 8 Hours (Mean: 11) (823)

b. How many of these hours are paid?

114,115 Med: 0 Hours (Mean: 4) (790)

c. How many additional hours beyond drill time, would you be willing to train per month if you were paid for all of them?

116,117 Med: 10 Hours (Mean: 16) (888)

43. Would you like to go on full time active duty for the Reserve Component on a seasonal basis (2 or 3 months out of every year)? (43.9) (56.1) (w/o full time personnel 1777)

118 42.9 (2) Yes 57.1 (1) No (2099)

44. Do you think your unit would be better trained if AT was one week every six months (twice a year)?

119 26.3 (2) Yes 73.7 (1) No (2109)

45. If your unit had a three week Annual Training, would you attend?

120 67.5 (2) Yes 32.5 (1) No (2113)

b. If not, what factors would prevent you from going to a three week Annual Training? (Check all that apply.)

121 51.7 Family
122 41.0 Spouse
123 83.5 Civilian Job
124 42.6 I don't want to
125 34.3 It would affect my vacation time
126 43.7 Money

46. Would you stay in the reserve component if you were required to attend a three week Annual Training?

75.6 (2) Yes 24.4 (1) No (2132)

47. Suppose the soldiers at your armory could schedule their own drills. For example, they could schedule two drills for one month and no drills the next month. Would this be more convenient for you?

128 51.7 (2) Yes 48.3 (1) No (2130)

48. If this were done, do you think attendance at drills would increase or decrease? (Check one.)

129 28.6 (3) Increase 38.9 (2) No change 32.5 (1) Decrease (2131)

49. Are you a trainer? (Do you teach others?)

130 51.5 (2) Yes 48.5 (1) No If not, skip to question 50. (2124)

a. Are you paid for your lesson preparation time?

11.7 (3) I'm paid for all my lesson preparation time
19.2 (2) I'm paid for part of my lesson preparation time
69.0 (1) I'm not paid for my lesson preparation time

b. Do you usually have enough time for lesson preparation to do a good job?

132 70.5 (2) Yes 29.5 (1) No (1202)

c. How many hours of your own time do you usually spend preparing training for the next drill.

133, 134 Med: 4 Hours (Mean: 6) (1143)

d. How many hours of monthly drill time do you usually spend preparing training for the next drill?

135, 136 Med: 2 Hours (Mean: 2.8) (1136)

e. How much advance notice do you usually get to prepare training? (Check one.)

18.4 (5) 3 or more drill weekends
24.3 (4) 2 drill weekends
38.2 (3) 1 drill weekend (1183)
13.4 (2) Less than 1 drill weekend
5.5 (1) None

50. How do soldiers usually receive training in your unit? (Check one.)

55.2 (7) On the job training (OJT)
26.8 (6) Hands on
8.2 (5) Lecture and discussion
1.5 (1) Self paced instruction
7.4 (3) Group demonstration
.6 (2) Simulators
.1 (1) Computer based instruction

139

51. There is too much paperwork in the Reserve Components.

<u>29.3</u> (5)	<u>29.7</u> (4)	<u>35.8</u> (3)	<u>4.6</u> (2)	<u>.6</u> (1)	(2140)
Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	
Agree		Agree/Disagree			

140

52. Drills in the field are better than drills in the Armory.

<u>20.8</u> (5)	<u>29.0</u> (4)	<u>32.6</u> (3)	<u>12.1</u> (2)	<u>5.5</u> (1)	(2132)
Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	
Agree		Agree/Disagree			

141

53. We would be more effective if we spent more of our time training in larger groups (at platoon, Company level or higher).

<u>3.7</u> (5)	<u>16.0</u> (4)	<u>38.7</u> (3)	<u>32.5</u> (2)	<u>9.1</u> (1)	(2132)
Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	
Agree		Agree/Disagree			

142

54. Active Duty Army staff (such as Readiness Group, advisors, or mobile training teams) are very helpful for unit training.

<u>11.8</u> (5)	<u>38.7</u> (4)	<u>38.5</u> (3)	<u>8.0</u> (2)	<u>3.0</u> (1)	(2132)
Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	
Agree		Agree/Disagree			

143

55. Most topics for unit training are decided at the local level by my unit.

<u>5.8</u> (5)	<u>45.4</u> (4)	<u>36.6</u> (3)	<u>10.2</u> (2)	<u>1.9</u> (1)	(2111)
Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	
Agree		Agree/Disagree			

144

56. Unit training would be more effective if more topics for training were selected at the local level.

<u>11.0</u> (5)	<u>46.0</u> (4)	<u>38.3</u> (3)	<u>4.1</u> (2)	<u>.5</u> (1)	(2108)
Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	
Agree		Agree/Disagree			

145

57. In order to improve unit readiness, which area do you think should receive the greatest command emphasis? (Check one.)

6.5 (4) Performance on Soldiers Manual common tasks (2061)
19.0 (3) Performance on Soldiers Manual MOS specific tasks
12.3 (2) Unit mission accomplishment in field training exercises
62.2 (1) All of the above should have equal emphasis

146

58. How many full time people are there at your Armory? (Skip this item if you don't know.)

Med: 4 Number of full time people (Mean: 3.7) (933)

59. There are many ways to improve unit performance. Which of the following would improve the performance of your unit the most? Improvement in: (Check all that apply.)

147 56.4 Organization of training time
148 37.5 Preparation of trainers
149 50.5 Access to simulation training devices
150 36.2 Access to computer assisted instruction
151 44.6 Rewards for effective performance
152 34.1 Training materials (Training Manuals, Field Manuals)

60. Does your unit have simulator training devices?

153 33.3(2) Yes 66.7(1) No If no, go to question 61. (2034)

a. If yes, does your unit have the simulation devices listed below? Check all that apply.

154 36.3 Weaponeer
155 20.4 Tank Gunnery Missile and Tracking System (TGMTS)
156 19.1 Mark 60 Conduct of Fire Trainer (MCOFT)
157 26.0 Mini Tank Range
158 16.8 Training Set Fire Observation (TSFO)
159 19.1 Hoffman Device
160 31.8 Multiple Integrated Laser Engagement System (MILES)
161 17.5 A Manual or Computer Driven Battle Simulation Game
162 20.4 Other, list

b. If yes, are the simulation devices used effectively to improve performance.

163 75.8(2) Yes 24.2(1) No

61. How can the use of simulator training devices be improved in your unit? Better: (Check all that apply.)

164 69.9(6) Availability
165 44.1(5) Guidance on how to use simulators
166 26.3(4) Maintenance of simulators
167 35.0(3) Guidance on how simulators fit in with other training
168 31.5(2) Training of trainers on simulators
169 5.3(1) Other, list

62. A microcomputer is a personal or home computer. How many microcomputers are there in your unit?

170 4.4(5) Four or More 3.9(4) Two or Three
5.0(3) One 45.4(2) None 41.3(1) Don't Know (2043)

If none or don't know, skip to question 63.

a. How often are the microcomputers in your unit used?

171 26.0(5) Frequently 10.0(4) Sometimes 5.5(3) Rarely (469)
15.6(2) Never 42.9(1) Don't know

172

b. If rarely or never, indicate why. (Check the most important reason.)

61.0(3) Soldiers haven't learned how to use them
20.8(2) Soldiers lack interest in microcomputers or are not required to use them
18.2(1) Computers lack useful software or hardware or maintenance

63. About how much of the training time in your unit do you think is wasted? (Check one.)

173 14.2(6) 50% or more 12.7(5) 40% 18.9(4) 30%
20.8(3) 20% 25.2(2) 10% 8.2(1) None (2078)

64. About how much of your total drill time is spent on training of any kind?

174 6.2(6) 100% 39.9(5) 80% 27.0(4) 60% (2096)
14.8(3) 40% 10.7(2) 20% 1.4(1) None

65. There are many reasons for wasted training time. In what categories do you think the most important reasons fall. (Check all that apply.)

175 55.9 Training lacks priority when something else comes along
176 38.6 Training should be better organized
177 19.1 Trainers are not well prepared
178 19.3 Equipment often breaks down
179 43.9 Training facilities, equipment or materials not available
180 25.6 Instruction is not presented in interesting ways

66. Do you have a full time training officer/NCO assigned to your unit?

181 79.0(2) Yes 21.0(1) No (2010)

67. If yes, how often does the full time training officer/NCO personally teach lessons during weekend drills?

182 7.3(5) Very frequently 17.7(4) Frequently (1625)
23.3(3) Sometimes 29.0(2) Rarely 22.6(1) Never

68. How useful have the training materials listed below been in your achieving training objectives or training responsibilities? (Check one in each group.)

a. Technical manuals

183 57.6(4) Very useful 34.5(3) Somewhat useful
2.5(1) Of no use 5.4(1) Have not used

b. Soldier's Manual of Common Tasks

184 52.7(4) Very useful 38.5(3) Somewhat useful
1.8(2) Of no use 7.0(1) Have not used

c. Field Manuals

52.5 (4) Very useful 37.5 (3) Somewhat useful (2089)
1.2 (2) Of no use 8.8 (1) Have not used

d. Trainers Guides

35.2 (4) Very useful 40.3 (3) Somewhat useful (2076)
2.3 (2) Of no use 22.2 (1) Have not used

e. Lesson plans and outlines

41.3 (4) Very useful 38.8 (3) Somewhat useful (2088)
4.4 (2) Of no use 15.5 (1) Have not used

f. Job book

36.7 (4) Very useful 41.2 (3) Somewhat useful (2084)
8.1 (2) Of no use 14.1 (1) Have not used

g. Job aids

38.4 (4) Very useful 40.3 (3) Somewhat useful (2071)
2.5 (2) Of no use 18.7 (1) Have not used

h. Soldiers Manual of MOS tasks

54.4 (4) Very useful 37.4 (3) Somewhat useful (2090)
2.7 (2) Of no use 7.5 (1) Have not used

i. Worksheets

26.0 (4) Very useful 41.8 (3) Somewhat useful (2077)
6.5 (2) Of no use 25.7 (1) Have not used

j. Decision Table

15.1 (4) Very useful 28.2 (3) Somewhat useful (2047)
6.4 (2) Of no use 50.3 (1) Have not used

69. Are there enough Soldiers Manuals for your unit?

65.4 (2) Yes 34.6 (1) No (2045)

70. Are there enough Technical and Field Manuals for your unit?

61.3 (2) Yes 38.7 (1) No (2046)

71. Do you have the Army Regulations that are required for your job?

60.7 (2) Yes 39.3 (1) No (2047)

72. Does your unit have access to the following types of equipment for training? (Answer for each type of equipment.)

a. Heavy Mortar Ballistic Computer

3.4 (3) Yes 57.1 (2) No 39.5 (1) I'm not sure what that is (2014)

FOR
OFFICE
USE
ONLY
197

b. M60 Series Tanks (1986)
26.7 (3) Yes 61.3 (2) No 12.0 (1) I'm not sure what that is

c. M48A5 tank (1941)
5.7 (3) Yes 77.6 (2) No 16.6 (1) I'm not sure what that is

d. M113 (1973)
28.4 (3) Yes 51.0 (2) No 20.5 (1) I'm not sure what that is

e. M1 tank (1942)
8.4 (3) Yes 77.3 (2) No 14.2 (1) I'm not sure what that is

f. Improved TOW Vehicle (ITV) (1947)
12.5 (3) Yes 64.7 (2) No 22.8 (1) I'm not sure what that is

g. M198, 155 Howitzer (1954)
13.9 (3) Yes 70.1 (2) No 16.1 (1) I'm not sure what that is

h. UGC 74 Teletypewriter (1952)
12.5 (3) Yes 55.8 (2) No 31.7 (1) I'm not sure what that is

i. Bessler Cue See (1976)
25.5 (3) Yes 32.2 (2) No 42.3 (1) I'm not sure what that is

j. M-8 NBC Alarm (1983)
56.4 (3) Yes 20.2 (2) No 23.4 (1) I'm not sure what that is

k. Sub caliber devices
53.9 (3) Yes 23.0 (2) No 23.1 (1) I'm not sure what that is

73. How satisfied are you with being in the Reserve Component?
(Check one.)

207
Very 29.7 (5) Satisfied 44.8 (4) Satisfied 15.2 (3) or Dissatisfied
Dissatisfied 7.3 (2) 3.0 (1) Very Dissatisfied (2101)

74. How satisfied are you with the training you've received?

208
16.5 Very 49.7 17.3 Neither Satisfied
Satisfied 12.2 (2) Dissatisfied 4.4 (1) Very Dissatisfied (2090)
Dissatisfied

75. How satisfied are you with the pay in the Reserve Component?

209
Very 16.4 (5) Satisfied 47.8 (4) Satisfied 17.2 (3) or Dissatisfied
Dissatisfied 12.0 (2) 6.5 (1) Very Dissatisfied (2101)

FOR
OFFICE
USE
ONLY
210

76. How satisfied are you with the job you have been assigned?

	Very		Neither Satisfied	
35.2	(5)	Satisfied	44.7 (4) Satisfied	11.8 (3) or Dissatisfied
5.0	(2)	Dissatisfied	3.3 (1) Very Dissatisfied	(2129)

77. Our unit morale is high.

13.6	(5)	45.5 (4)	28.3 (3)	9.8 (2)	2.8 (1) (2120)
Strongly	Agree	Neither	Disagree	Strongly	Disagree
Agree		Agree/Disagree			

78. Soldiers who deserve to be promoted are not promoted fast enough.

24.1	(5)	35.6 (4)	28.3 (3)	10.0 (2)	1.9 (1) (2121)
Strongly	Agree	Neither	Disagree	Strongly	Disagree
Agree		Agree/Disagree			

79. There should be more awards and recognition.

23.0	(5)	42.9 (4)	29.3 (3)	4.3 (2)	.5 (1) (2126)
Strongly	Agree	Neither	Disagree	Strongly	Disagree
Agree		Agree/Disagree			

80. Military discipline is handled in a fair and effective manner in my unit.

13.1	(5)	47.3 (4)	26.9 (3)	9.3 (2)	3.4 (1) (2122)
Strongly	Agree	Neither	Disagree	Strongly	Disagree
Agree		Agree/Disagree			

81. Do you supervise others?

215 54.9 (2) Yes 45.1 (1) No (2118)

a. If yes, how many people do you supervise?

6.0	5, 50 or more	7.3 (4)	26--50	9.4 (3)	13--25
35.0	(2) 5--12	42.3 (1)	1--4	(1182)	

82. NCO's and officers in my unit often check to see that training is going well.

12.5	(5)	58.6 (4)	20.5 (3)	6.6 (2)	1.5 (1) (2122)
Strongly	Agree	Neither	Disagree	Strongly	Disagree
Agree		Agree/Disagree			

83. Our NCO's are easy to work with.

21.9	(5)	62.3 (4)	12.4 (3)	2.7 (2)	.8 (1) (2125)
Strongly	Agree	Neither	Disagree	Strongly	Disagree
Agree		Agree/Disagree			

84. Our officers are easy to work with.

17.1	(5)	57.3 (4)	17.6 (3)	5.6 (2)	2.3 (1) (2119)
Strongly	Agree	Neither	Disagree	Strongly	Disagree
Agree		Agree/Disagree			

FOR
OFFICE
USE
ONLY

220

85. My chances for promotion will increase if I perform well on soldiers manual tasks.

<u>8.3</u> (5)	<u>31.6</u> (4)	<u>35.0</u> (3)	<u>15.3</u> (2)	<u>9.7</u> (1)	(2085)
Strongly Agree	Agree	Neither Agree/Disagree	Disagree	Strongly Disagree	

221

86. My chances for promotion will increase if I perform well during unit field training exercises.

<u>10.7</u> (5)	<u>37.8</u> (4)	<u>20</u> (3)	<u>13.1</u> (2)	<u>9.5</u> (1)	(2084)
Strongly Agree	Agree	Neither Agree/Disagree	Disagree	Strongly Disagree	

222

87. I am seriously considering leaving the Reserve Component upon completion of my current term of enlistment.

38.4 (2) Yes 61.6 (1) No (2059)

a. If yes, why have you considered leaving? (Check all that apply.)

223

36.5 Too much wasted time

224

22.3 Poor quality training

225

43.4 Can't accomplish all I would like to do

226

29.6 Family Reasons

227

35.9 Heavy civilian career responsibilities

228

31.9 Low pay

229

10.5 Moving to new area

230

3.3 Medical reasons

231

13.1 Retirement

88. When you attended your first drill after joining your unit, did you have a sponsor who helped you with inprocessing?

232

48.7 (2) Yes 51.3 (1) No (2083)

89. Why did you join the Reserve Component? (Check all that apply.)

233

68.8 To increase my income

234

43.8 To learn a skill

235

56.1 To defend my country

236

38.3 To earn retirement points

237

38.5 To get education benefits

238

13.1 To do something interesting

90. When you attended your first drill after joining your unit, did you meet at least 4 of the units officers and NCO's?

239

48.7 (2) Yes 51.3 (1) No (2083)

91. Officers in my unit are willing to delegate appropriate responsibilities to NCO's.

<u>15.5</u> (5)	<u>55.2</u> (4)	<u>22.8</u> (3)	<u>4.8</u> (2)	<u>1.7</u> (1)	(2100)
Strongly Agree	Agree	Neither Agree/Disagree	Disagree	Strongly Disagree	

240

241

92. Most training in my unit is given by lowest level supervisors (squad leaders, crew chiefs, vehicle commanders).

13.0 (5) 51.9 (4) 27.1 (3) 7.4 (2) 6 (1) (2100)
Strongly Agree Neither Disagree Strongly Agree
Agree Agree/Disagree Disagree

242

93. The quality of training given by my first-line supervisor is:

15.9 (5) Outstanding
29.2 (4) Excellent
46.3 (3) Satisfactory
6.1 (2) Marginal
2.6 (1) Unsatisfactory

243, 244

94. About how many hours per month during drills do you spend instructing or teaching others?

Med: 2 hour (Mean: 4)

ADDITIONAL INSTRUCTIONS

1. The questions on the following pages (Annex A-G) are for enlisted personnel only. Officers may answer questions about tasks for a specific MOS, related to their DSSI, if they so desire.
2. The following pages contain questions about whether you can perform level 1 tasks taken from the soldiers manual for:
 - a. Common tasks (Annex A)
 - b. 19E -- Armor Crewman (Annex B)
 - c. 12B -- Combat Engineer (Annex C)
 - d. 71L -- Administrative Specialist (Annex D)
 - e. 76Y -- Supply Specialist (Annex E)
 - f. 19D -- Cavalry Scout (Annex F)
 - g. 64C -- Motor Transport Operator (Annex G)
3. All enlisted personnel complete Annex A, Common Tasks, first. If your duty MOS is not listed above, do not complete any other annexes.
4. If your duty MOS is listed above, then complete the annex for that MOS next.
5. Do not answer more than two (2) annexes. One for Common Tasks and another for duty MOS, as appropriate.

ANNEX A COMMON TASKS LEVEL 1

CAN YOU PERFORM THIS TASK?

FOR OFFICE USE ONLY	YES	NO	(1500)	DON'T KNOW HAVEN'T EVER TRIED
245	76.3	8.4		15.3
246	73.8	12.2		14.0
247	93.9	2.5		3.6
248	93.1	3.5		3.5
249	84.8	6.5		8.7

The tasks below are in the Soldiers Manual for Common Tasks. For each task, place a check in the yes or no or haven't ever tried column. The yes indicates you believe you can perform the task to the standard, and under the condition, given for that task in the Soldiers Manual.

Maintain, apply immediate action, reduce stoppages, and fire the following weapons: (Questions 6-10)

6. M-16 rifle
7. M-79 Grenade Launcher
8. M-60 Machine Gun
9. LAW
10. Employ hand grenades
11. Move under direct or indirect fire
12. Select, and construct an individual fighting position
13. Camouflage yourself and your equipment
14. Locate mines by probing
15. Use a challenge and password
16. Put on, wear, remove, and store the protective mask
17. Put on and wear MOPP gear
18. Recognize and react to CBR attack
19. Apply field dressings
20. Put on a tourniquet

CAN YOU PEEFORM THIS TASK?

		DON'T KNOW		HAVEN'T EVER TRIED	
		YES	NO	(113)	
FOR OFFICE USE ONLY	266-68				
269	75.0		10.2		14.8
270	76.8		11.6		11.6
271	54.7		21.3		20.0
272	76.5		16.6		12.6
273	56.6		16.9		23.6
274	62.3		18.8		17.8
275	64.5		14.0		21.5
276	61.5		16.3		22.1
277	66.6		14.7		15.7
278	66.9		14.6		15.5
279	76.4		10.1		13.5
280	78.3		10.6		10.6
281	67.3		16.7		15.6
282	64.1		14.6		21.4
283	63.5		15.3		21.2
284	49.4		27.1		23.5
285	64.1		26.5		19.4
286	63.5		15.3		21.2
287	65.9		15.3		18.8
288	79.4		8.8		11.8

The level 1 tasks below are in the Soldiers Manual for MOS 19E, Armor Crewman. For each task place a check in the yes or no or haven't ever tried column. The yes indicates you believe you can perform the task to the standard, and under the condition, given for that task in the Soldiers Manual.

1. Inspect, prepare, and stow ammunition
2. Use hand and arm signals
3. Use flag signals
4. Perform operators preventative maintenance checks and services, and mount appropriate radios
5. Call for and adjust indirect fire
6. Maintain, apply immediate action, reduce stoppages, and fire the 45 cal submachine gun
7. Bore sight and fire the 50 cal machine gun
8. Bore sight and fire the coaxial machine gun
9. Bore sight the main gun
10. Perform required chocks and services on the tank engine, suspension, and track
11. Perform operators maintenance on Basic Issue Items(BII)
12. Drive a tank
13. Escape from a tank
14. Replace a thrown track
15. Remove/install track blocks
16. Troubleshoot the fire control system
17. From the gunners station, engage targets with the main gun
18. Evacuate a wounded crewman
19. Prepare a range card for all weapons
20. Maintain, apply immediate action, reduce stoppages, and fire the 45 cal pistol

CAN YOU PERFORM THIS TASK?

DON'T KNOW-
HAVEN'T
EVER TRIED

(378)

FOR OFFICE
USE ONLY

YES

NO

266-68	92.8	2.2	5.0
270	79.0	9.9	11.0
271	80.9	7.3	11.8
272	80.6	9.1	10.2
273	80.9	7.8	11.3
274	87.5	4.0	8.5
275	88.6	3.7	7.7
276	87.1	4.8	8.0
277	47.7	21.9	20.4
278	52.2	23.7	24.4
279	46.7	33.7	19.6
280	80.9	10.9	9.1
281	63.7	17.5	18.8
282	78.7	9.3	12.0
283	74.6	10.0	15.4
284	67.1	13.2	19.7
285	69.5	17.0	22.4
286	74.7	13.2	12.1
287	74.1	11.3	14.6
288	63.8	12.3	23.8

The level 1 tasks below are in the Soldiers Manual for MOS 12B, Combat Engineer. For each task place a check in the yes or no or haven't ever tried column. The yes indicates you believe you can perform the task to the standard, and under the condition, given for that task in the Soldiers Manual.

1. Maintain and use engineer tools
2. Maintain and use demolition equipment
3. Detonate explosives
4. Install anti personnel mines
5. Install anti tank mines
6. Locate mines using a mine detector set
7. Install barbed wire
8. Install concertina wire
9. Identify components of a Bailey bridge
10. Operate a pneumatic assault boat
11. Identify components of a float bridge
12. Tie knots and lashings
13. Reeve simple tackle systems
14. Operate a generator
15. Load and transport explosives
16. Place breaching charges
17. Investigate and clear demolition misfires
18. Identify limiting slopes and curves
19. Determine stream width and velocity
20. Assemble corrugated metal pipe for culverts

ANNEX D ADMINISTRATIVE SPECIALIST (71L) LEVEL 1

CAN YOU PERFORM THIS TASK?

DON'T KNOW- HAVEN'T EVER TRIED			(56)		
FOR OFFICE USE ONLY	YES	NO			
266-68					

The level 1 tasks below are in the Soldiers Manual for MOS 71L, Administrative Specialist. For each task place a check in the yes or no or haven't ever tried column. The yes indicates you believe you can perform the task to the standard, and under the condition, given for that task in the Soldiers Manual.

269	92.5	0	7.5	1. Type a basic comment to a Dif
270	89.3	1.8	3.9	2. Type a military letter
271	94.6	0	5.4	3. Type a non military letter
272	87.5	1.8	10.7	4. Type an endorsement to a military letter
273	71.4	7.1	21.4	5. Type a joint messageform
274	69.6	5.4	25.0	6. Type military orders
275	91.1	1.8	7.1	7. Type a memorandum
276	83.9	5.4	10.7	8. Route incoming distribution
277	78.6	7.1	14.3	9. Dispatch outgoing distribution
278	87.5	1.8	10.7	10. Establish functional files
279	82.1	7.1	10.7	11. Assemble correspondence
280	87.5	0	12.5	12. Post regulations and directives
281	67.9	5.4	26.8	13. Conduct administrative research
282	70.9	7.3	21.8	14. Safeguard classified material
283	94.6	1.8	3.6	15. Understand and use Army and National Guard regulations
284	91.1	3.6	5.4	16. File documents and correspondance
285	60.7	7.1	32.1	17. Process official accountable mail
286	57.1	8.8	33.9	18. Prepare a requisition for publications using AUTODIN
287	91.1	0	8.9	19. Type straight copy material
288	57.4	7.4	35.2	20. Receive and transfer classified material

ANNEX E UNIT SUPPLY SPECIALIST (16Y) LEVEL 1

CAN YOU PERFORM THIS TASK?

CAN YOU PERFORM THIS TASK?		DON'T KNOW-HAVEN'T EVER TRIED	
FOR OFFICE USE ONLY	YES	NO	(54)
266-68			

269	82.8	3.4	13.8
270	55.0	21.7	23.3
271	76.7	8.3	15.0
272	82.0	8.2	9.8
273	85.2	6.6	8.2
274	63.9	19.7	16.4
275	68.3	16.7	15.0
276	82.0	7.7	11.5
277	90.2	4.9	4.9
278	86.9	3.3	9.8
279	68.9	16.4	14.8
280	82.9	8.2	9.8
281	86.9	1.6	11.5
282	70.0	10.0	20.0
283	80.3	9.8	9.8
284	73.8	9.8	16.4
285	75.4	11.5	13.1
286	67.2	9.8	23.0
287	78.3	6.7	15.0
288	83.3	5.0	11.7

The level 1 task below are in the Soldiers Manual for MOS 64C, Unit Supply Specialist. For each task place a check in the yes or no or haven't tried column. The yes indicates you believe you can perform the task to the standard, and under the condition, given for that task in the Soldiers Manual.

1. Pitch a GP medium tent
2. Process personal and organizational laundry
3. Prepare and process personal clothing requests
4. Prepare and maintain Organization Clothing and Equipment Record
5. Order supplies and equipment
6. Request supply status for high priority requests
7. Request cancellation of supplies
8. Receive supplies and equipment
9. Issues supplies and equipment to hand receipt holders
10. Store supplies and equipment in unit storage areas
11. Maintain due-in status file for requested items
12. Prepare and maintain hand/sub hand receipt files
13. Turn in supplies and equipment
14. Transfer supplies and equipment
15. Prepare and maintain a document register
16. Update signature cards
17. Control weapons and ammunition in security areas
18. Maintain key control register for weapons storage areas
19. Issue and receive weapons
20. Perform preventive maintenance on assigned weapons

ANNEX F CAVALRY SCOUT(19D). LEVEL 1

CAN YOU PERFORM THIS TASK?

		DON'T KNOW-HAVEN'T EVER TRIED			
FOR OFFICE USE ONLY	YES	NO	(118)		
266-68					

The level 1 tasks below are in the Soldiers Manual for MOS 19D, Cavalry Scout. For each task place a check in the yes or no or haven't tried column. The yes indicates you believe you can perform the task to standard, and under the condition, given for that task in the Soldiers Manual.

269	87.7	4.4	7.9	1. Prepare and operate required FM Radio sets
270	83.2	3.0	13.9	2. Install and operate a Field phone
271	45.7	23.3	31.0	3. Use an M-174 series Radiometer
272	87.5	3.6	8.9	4. Prepare for NBC attack
273	86.2	3.4	10.3	5. Determine a location on the ground by terrain association
274	60.4	15.8	23.8	6. Emplace/install, locate, and remove mines and booby traps
275	62.6	12.1	25.3	7. Construct and install electric and non electric demolition systems
276	62.2	13.3	24.5	8. Collect data for classification of a route
277	77.2	8.8	14.0	9. Call for and adjust indirect fire
278	88.9	1.0	10.1	10. Perform preventive maintenance on Basic Issue Items(BII)
279	68.0	10.7	21.4	11. Maintain and use night vision goggles
280	91.2	1.8	7.0	12. Maintain, operate, and engage targets with the M-16 rifle
281	79.6	5.1	15.3	13. Maintain, operate, and engage targets with the M-203 Grenade Launcher
282	79.0	7.0	14.0	14. Maintain, operate, and engage targets with the M-60 Machine Gun
283	65.3	17.8	16.9	15. Maintain, operate, and engage targets with the Cal 50 Machine Gun
284	16.2	35.4	48.5	16. Maintain, operate and engage targets with the Dragon
285	13.0	34.8	52.2	17. Maintain, operate, and engage targets with the TOW
286	60.3	19.0	20.7	18. Drive and perform maintenance on the M-113 tracked vehicle
287	44.6	25.7	29.7	19. Maintain and operate night vision devices, infrared equipment, and blackout drive on an M-113 tracked vehicle
288	69.3	10.9	10.8	20. Perform duties as a road guide

ANNEX G MOTOR TRANSPORT OPERATOR (64C) LEVEL 1

The level 1 tasks below are in the Soldiers Manual for MOS 64C, Motor Transport Operator. For each task place a check in the yes or no or haven't tried column. The yes indicates you believe you can perform the task to the standard, and under the condition, given for that task in the Soldiers Manual.

FOR OFFICE USE ONLY	CAN YOU PERFORM THIS TASK?		DON'T KNOW-HAVEN'T EVER TRIED
	YES	NO (91)	
266-68			
269	74.4	6.7	18.9
270	72.5	6.6	20.9
271	95.6	0	4.4
272	97.8	1.1	1.1
273	96.7	1.1	2.1
274	96.7	2.2	1.1
275	76.4	6.7	16.9
276	83.3	3.7	13.3
277	72.1	8.1	19.8
278	72.2	6.7	21.1
279	72.2	6.7	21.1
280	83.3	3.3	13.3
281	93.3	1.1	5.6
282	95.6	1.1	3.7
283	89.7	3.4	6.9
284	88.5	3.4	8.0
285	95.5	0	4.5
286	86.4	2.3	11.4
287	72.7	6.6	19.3
288	45.5	13.6	40.9

APPENDIX D

OFFICER DSSI AND ENLISTED MOS QUALIFICATION (IDAHO RC)

Officer DSSI and Enlisted MOS Qualification (Idaho RC)

1. Officer/Warrant Officer.

a. In the Idaho RC there are 60, 3 digit Officer and Warrant Officer DSSIs. These are spread among 40 separate units throughout the state, with the greatest concentration in 6 major units in Boise, Twin Falls, Pocatello, and Lewiston.

b. An analysis of unqualified Officers and Warrant Officers reveals the following:

(1) There are 350 Officers and Warrant Officers assigned. Of these, 82 in 31 DSSIs, or approximately 23%, are unqualified.

(2) Of the unqualified, the greatest numbers are in DSSIs 12C (Armored Cavalry) and 21J (Combat Engineer). The next significant numbers of unqualified are found in DSSIs 12A, 13E, and 100B. These 5 DSSIs contain 48% of the unqualified Officers and Warrant Officers in the Idaho RC.

(3) The two DSSIs with the most unqualified Officers also have a large number of Officers assigned to them (12C and 21J)

(4) The complete list of unqualified Officers and Warrant Officers in the Idaho RC, by DSSI follows: (The three digit DSSI is followed by the number of unqualified Officers and, in parentheses, the total assigned).

12A-4(8)	31A-1(3)	71A-1(2)
12B-1(5)	310-1(1)	72A-1(1)
12C-12(31)	35A-2(3)	74A-2(5)
13A-2(3)	41A-3(7)	75B-1(1)
13E-4(6)	41B-1(4)	91A-2(3)
15A-1(5)	45A-1(2)	91B-3(5)
15B-2(13)	45C-1(1)	92B-2(11)
21C-1(1)	53B-1(2)	95A-1(3)
21J-16(63)	54A-2(9)	100B-4(54) Avn Warrant Off
23A-2(3)	630-3(8)	

2. Enlisted

a. There are over 140 MOSs in the Idaho RC. Eighty three of these have less than 80% of their assigned personnel qualified.

b. Twenty-three of these 83 MOSs have 20 or more personnel assigned. Six of the 23 have the greatest numbers of assigned personnel. These six, therefore, were selected to be included in the survey as representing the greatest density of non-qualified personnel throughout the state.

c. The 21 MOSs (less than 80% qualified) with the largest numbers of assigned personnel, follow. Those selected to be included as annexes to the questionnaire, in addition to the

common task annex, are the top six:

MOS	ASGD	QUALIFIED	% QUAL
12B	736	556	76
19D	252	177	70
19E	178	128	72
64C	101	78	77
76Y	77	60	77
71L	68	51	75
13B	67	49	73
91A	56	39	69
67N	52	41	79
63N	49	37	76
76C	38	17	44
31C	34	15	44
75B	33	17	48
31V	32	14	43
76P	31	19	61
54E	27	19	70
31K	27	6	22
11C	27	21	78
16S	24	13	54
63W	24	19	79
62E	23	17	74
63B	20	21	95
51B	20	15	75

TABLE D-1

RC MOS QUALIFICATION RATES WITHIN SIXTH ARMY

ARMY NATIONAL GUARD

AREA	PERCENT QUALIFIED
SOUTH DAKOTA	88.6
IDAHO	84.8
MONTANA	82.7
WYOMING	82.5
NORTH DAKOTA	79.3
OREGON	78.8
UTAH	77.2
WASHINGTON	76.7
CALIFORNIA	72.7
NEVADA	72.0
COLORADO	70.0
ARIZONA	68.3

US ARMY RESERVE

124TH ARCOM	80.3
96TH ARCOM	78.9
63RD ARCOM	73.4
104TH TRAINING DIV.	69.4
91ST TRAINING DIV.	67.3
311TH COSCOM	66.6

APPENDIX E
SENIOR LEADERSHIP INTERVIEWS

1. SENIOR LEADERSHIP INTERVIEW PROCEDURES
2. SENIOR LEADERSHIP INTERVIEW CONCLUSIONS
3. SENIOR LEADERSHIP INTERVIEW RECOMMENDATIONS

Senior Leadership Interview Procedures

Initially, Officers at the 116th ACR Commanders Conference, held in April, 1986, ranked areas of training in terms of where they believed that training emphasis should be placed (Table E-1). After the survey was completed, MOS Interviews were held with enlisted personnel. Then Senior Leadership Interviews were held in a group setting with Senior Idaho RC NCOs and Officers. In each group tentative needs identified by all sources were discussed and suggestions for improvement proposed. Needs were ranked by leaders in terms of the value, to the Idaho RC, of satisfying them. At Table E-2 is a list of the twelve needs areas discussed with Senior NCOs. Results from the NCO group were analyzed and a reduced set of training needs were derived and further discussed in Leadership Interviews with Senior Officers (Table E-3). Both Officers and NCOs provided suggestions for satisfying identified needs. Suggestions were then analyzed in terms of cost/benefit to the Idaho RC. Cost/benefit data was obtained by asking both the Senior Officers and NCOs to rate (a) the value of the solution to the Idaho RC; (b) the dollar cost; and (c) the probability of the suggested solution being successful. The ratings were made on three point scales. These data are shown in Tables E-4 and E-5.

Senior Leadership Interview Conclusions

The needs of the Idaho RC as perceived by Officers and Senior NCOs of the ARNG and USAR, which have significance for the improvement of RC training, are noted here as the conclusions of the Senior Leadership Interviews.

1. Time given to RC training is nearing an upper limit for many RC soldiers.

Officers and Senior NCOs must put in considerable amounts of both paid and unpaid time, beyond normal drill and annual training, in order to effectively plan, prepare, and conduct mandated training and administration.

2. Required school training takes RC personnel away from their units for excessive periods of time.

RC soldiers spend a higher proportion of their military careers in formal school training than do AC soldiers. School time spent away from the unit on the part of enlisted personnel inhibits effective unit training. Officer school time, spent in addition to IDT/AT, inhibits officer retention.

3. Effective management of both individual and unit training time, that maximizes readiness, is difficult.

Both kinds of training are essential. There is a conflict between the amounts of dedicated training time given to each, in an RC environment which is characterized by limited training time.

4. There is pressure on RC units (especially combat units) to training at higher echelons.

Training at levels beyond Company/Troop limits the effectiveness of training for lower echelons. Wartime requirements for the RC stress deployment of units as organized (e.g., Battalion, Brigade, Division), which tends to force training into higher levels at the expense of lower level unit and individual training and readiness.

5. There is too much reference material required in order to effectively plan, prepare, and conduct training.

The number of documents and publications needed is excessive. Most require extensive cross referencing to other documents which soldiers may or may not have.

6. There are too many administrative tasks which must be accomplished during IDT and AT.

Removal of personnel from training for administrative purposes, and assignment of personnel for the purpose of completing mandated administrative tasks, constitute important training distracters and inhibit training effectiveness.

7. The concept of flexible IDT organization and scheduling is not actively implemented.

IDT is rigidly organized into one weekend per month. No attempt is made to accommodate training requirements through a system of flexible drill organization and scheduling.

8. Frequently, hip pocket/opportunity training is not effectively used by first line supervisors.

Soldiers tend to become training aids during unit level exercises when pauses in unit training are not used to train and sustain individual and small unit skills.

9. There is a need for improving training management at Company/Troop levels and below.

Present methods decentralize training management to the lowest command level. Planning may be strong or weak, depending on the commander. The extensive time and research needed to construct a viable unit training program tends to result in

differing degrees of proficiency among similar units, questionable prioritizing of individual and unit tasks, and excessive changes to training plans and schedules.

10. Training time is not fully utilized.

An excessive number of total demands on the unit, lack of careful training planning based on training needs, and attempting to train at a level too high for the ability of personnel can result in disorganization and confusion in the conduct of training. All of these factors have an adverse impact on effective use of training time.

11. Training emphasis should be placed at those levels which most effectively and efficiently achieve unit goals and objectives.

Training philosophy should emphasize progressive training, from simple to complex (e.g., individual, crew, platoon, etc.) using the "crawl, walk, run" method.

12. Attempting to achieve many training objectives concurrently, limits the effectiveness of the total program.

Requirements include proficiency on individual, unit, and crew served weapons tasks. Attempts to do these all at the same time, such as, conducting external ARTEPS and tank gunnery qualification during one AT, limit ability to become proficient in all of them.

13. There are outside, uncontrollable factors which inhibit proficiency in tank gunnery.

Crew turbulence, adverse weather conditions, range availability, ammunition allocations, and availability of simulators limit practice time and contribute to the inability of tank crews to gain and sustain skills and accomplish crew qualification.

14. The majority of RC personnel are inexperienced in the operation and maintenance of MILES.

It is difficult to keep MILES functional during field training if soldiers have little or no experience with the system. Use of MILES during IDT requires extra man days from part time soldiers for the time consuming tasks of mounting and removing the equipment from vehicles and servicing after training is completed.

15. For MILES to be a useful training tool, it must not only be operational, but must be used in the framework of a controlled and evaluated training environment.

Personnel who are experienced and capable of exercise control and evaluation are difficult to obtain and often must be drawn from participating units. Training area and range organization also depends on the unit soldier. The result is an inefficient use of both training time and MILES. The utility of using part-time soldiers and unit leadership to mount and dismount MILES, set up and run ranges, and act as exercise controllers and evaluators is questionable.

16. There could be confusion regarding what tasks are required for qualification in MOSs 19E, 19D, and 12B.

Training guides and POIs for these MOSs disagree on the type and number of tasks which are required for MOSQ. Changes to requirements are made more rapidly than can be reacted to by units in the field. This can result in MOS training in units being based on out-dated requirements.

17. Training emphasis on collective tasks tends to force a division of labor among soldiers in any one MOS.

Excessive time spent training on unit tasks restricts time available for cross training on MOS skills. Personnel tend to become specialists in a specific job with little ability to perform other tasks in the MOS.

18. Lack of equipment inhibits the ability of Idaho RC Engineer units to become proficient in basic bridging tasks.

Although required by Capstone alignment and wartime mission, engineer units have minimal bridging skills due to lack of equipment. As a result, soldiers generally perceive these skills to be of little value to unit readiness, even though they may be needed in wartime.

19. Minimal use is made of the local RF school for MOS qualification and reclassification.

Based on mission, organization, and resources, RF schools have the capability to meet RC requirements in this area. However, ARNG personnel do not rate RF schools highly regarding their ability to efficiently perform this role.

20. Traditional methods of MOS qualification and reclassification of RC soldiers do not necessarily accommodate RC needs.

Restricting methods of MOS qualification and reclassification to formal school training inhibits the ability of RC personnel to fit the training into personal schedules based on the requirements of civilian life.

21. Reclassification POIs for MOSs 19E and 19D do not consider the demands which civilian life has on the RC soldier.

POIs contain too many hours and too many subjects which are not essential for gaining minimum capability in the MOS (e.g., 240 hours of instruction which includes First Aid and NBC). Under these POIs, soldiers would have to spend almost a year of IDT and one AT in order to reclassify into these MOSs.

Senior Leadership Interview Recommendations

The recommendations which follow are based upon the suggestions made in the Senior Leadership Interviews and are related to the conclusions discussed in the preceding section.

1. Reduce the number of training requirements and training objectives. Emphasize fewer tasks done well and trained to standard, rather than many tasks done poorly and not to standard.

2. Structure the school system in such a way as to allow soldiers to continue to drill with their units while fulfilling requirements for advanced and reclassification training through combinations of unit, local, state, RF schools, and SOJT.

3. Reduce the number of advanced school requirements for RC personnel so that the ratio of their formal school time to total military career time more closely matches that of the AC soldier.

4. Establish as a minimum goal, platoon tactical proficiency based on performance with MILES, and restrict all external ARTEP evaluations to platoon level until ARTEP proficiency at platoon level has been proven.

5. Emphasize individual training. Train individuals first, then go to small unit training.

6. Resource and develop simplified, consolidated, and self-contained reference material that can be effectively used by personnel while in the field.

7. Provide resources to allow for one administrative drill (UTA) per quarter, in addition to the 48 drills per year. Use this drill for the completion of non-branch-specific requirements such as, personal record keeping, inspections, required subjects, physical training and testing, medical screens and exams, and any other administrative tasks which detract from training.

8. Emphasize flexible IDT organization, structure, and schedule that can be designed to accommodate RC training requirements and which enables lower level leadership to exercise training responsibility.

(a) Platoons drill on different weekends.

(b) Conduct progressive training, from individual skill level to unit level, on one weekend.

(c) Use successive monthly drills to train different echelons, culminating in a unit exercise.

(d) Use a rotation between stations concept on one weekend.

(e) Provide dedicated time, within the structure of collective training, for first line supervisors to conduct hip-pocket/opportunity training.

9. Provide the Company/Troop level commander with a standardized and simplified set of unit, and subordinate unit (platoon), tasks which are the minimum required for achievement of wartime mission readiness. Identify all individual tasks, by MOS and TOE, which must be accomplished, at a minimum, to support unit tasks.

10. Eliminate short notice requirements that create schedule changes. Standardize minimum requirements, individual and unit, to reduce confusion and simplify the planning and conduct of training.

11. Mandate annual qualification on Tank Tables I, II, and III, to be conducted at home station armories, during IDT. Consider changes in Tank Crew Gunnery Qualification requirements that will more closely reflect the characteristics of the RC training environment. Resource appropriate simulators to enhance individual and crew skills in Tank Gunnery.

- (a) Laser Target Interface Device
- (b) Scale Force Models
- (c) GUARDFIST

12. Provide MILES MTTs to local armories to train RC part time personnel on MILES operation and maintenance.

13. Resource and develop MILES job aids and training aids. Construct and develop MILES targets for all weapons.

14. Establish a full time training committee TDA as part of either an installation or STARC. Duties could be:

- (a) Maintain and operate ranges and training areas.
- (b) Assist with weapons instruction.
- (c) Provide MILES expertise and instruction.
- (d) Write exercise scenarios and act as ARTEP controllers/umpires/evaluators.
- (e) Assist with MOS qualification and reclassification instruction.

15. Stabilize changes to MOS qualification POIs and STPs.

Standardize tasks at a minimum number of requirements that will insure proficiency and that can be sustained in the RC environment.

16. Resource current computer assisted instruction systems to provide and enhance training in engineer tasks for which equipment is not available.

17. Resource and reorganize RF schools to accommodate RC MOS qualification training. Establish a standardized and stabilized instructor TDA that meets the needs of the local area and fill these slots with instructor personnel experienced in the subjects to be taught. Forecast student loads by mandating RC attendance.

18. Develop new strategies for training the individual which are tailored to meet RC needs in the RC environment.

(a) Tailor training methods for the specialized needs of each MOS.

(b) Establish a standardized and simplified number of MOS tasks which are critical to accomplishment of respective unit missions as a stabilized standard for MOSQ at level I.

(c) Emphasize performance testing for MOS qualification and reclassification. Focus on results (e.g., performance to standards) rather than method (e.g., schooling).

(d) Allow for MUTA zero (no drill attendance) for home study, where appropriate (e.g., some combat service support MOSs). Drill pay to be based on passing the tests on the tasks studies.

(e) Retain SOJT, as part of a structured training program, for those tasks which are repeated often in the unit environment.

(f) Use CAI, where appropriate, for the task, either at the unit, local school, or student home.

(g) Develop CAI courseware for applicable minimum basic tasks in high density MOSs.

(h) Develop VCR tapes which contain instruction on appropriate MOS tasks and that can be used by students in their personal VCRs.

(i) Develop reclassification POIs which require training only on those subjects which are essential for minimal MOS performance as detailed in item "b" above.

TABLE E-1
WHERE SHOULD THE MOST TRAINING EMPHASIS BE PLACED?

AREA OF TRAINING	RANKINGS			
	Overall	EM	01-03	04-05
Individual skill training (MOSQ)	1(1.9)	1(1.3)	1(2.0)	1(2.2)
Unit Training (Plt/trp/sqdn ARTEPS)	2(2.9)	4(3.8)	2(2.8)	3(3.3)
Training Management (Full use of tng time/tng org/ task prioritization)	3(3.2)	3(2.8)	3(3.0)	4(3.8)
Crew-Served Weapons/Tank gunnery (Table 8 qual)	4(3.5)	2(2.5)	4(4.1)	2(3.1)
Training with MILES	5(4.7)	5(5.2)	5(5.0)	5(4.1)
Simulators (COFT/TGMENTS/ TSFO/Computer games)	6(5.8)	7(7.0)	6(5.4)	7(6.4)
Remote Delivery of indiv tng through modern tech to home armories	7(6.1)	6(5.5)	7(6.3)	6(6.3)

Note: Soldiers ranked each of the seven training areas from 1-7 in terms of where training emphasis should be placed, with "1" given top priority. The average rank is shown in parentheses. Respondents were attendees at the Commanders Conference for the 116th Armored Cavalry Regiment (ACR), April, 1986. The number of respondents in each category of rank were:

Overall	45
NCO	6
01-03	26
04-06	13

TABLE E-2
RANKED TRAINING NEEDS BASED ON SENIOR NCO LEADERSHIP INTERVIEWS

RANK	NEED	AVG RANK
1.	Individual Skill Maintenance at Level 1 Emphasis on unit training and relative lack of emphasis on individual proficiency. Too many unit training requirements, and lack of time for individual skill training.	2.0
2.	Jr. Officer/NCO Supervision and Skills Personnel turbulence, lack of Officer branch qualification, and lack of NCO MOS and leadership skill training.	3.0
3.	Training Management Too many requirements, too many tasks attempted and done poorly, improper prioritization of individual and unit requirements result in disorganization, too many changes, wasted time.	4.2
4.	Wasted Training Time Too many requirements, poor organization and execution of plans, and trying too do to much with too little time, space, assets.	5.0
5.	Training Objectives Too much emphasis on unit training at the expense of individual skill sustainment, objectives set too high for the skill level of individual soldiers.	5.3
6.	Equipment and Weapons Overused/old assets. Parts in short supply, weak maintenance skills in other than maintenance units/limited maintenance training opportunities with too much reliance on full time personnel.	5.7
7.	Tactical Training Weak individual skills inhibit unit training. Attempting ARTEPS with weak individual skills and minimal small unit practice wastes time. Attempting to do gunnery and ARTEPS at the same time limits training effectiveness for both.	7.3
8.	19E/19D/12B Skills Lack of command emphasis on level 1 skill sustainment. Emphasis on unit training limits time for individual training and causes division of labor within MOSSs. Little or no cross training is accomplished.	7.5
9.	TRADOC/FORSCOM Guidance Simplify, consolidate, and standardize guidance. Possible disconnects and conflicts between various publications. No minimums established for critical unit and individual tasks.	8.7
10.	Communications Poor equipment and lack of equipment and spare parts. Weak operator skills and limited training time.	9.1
11.	Crew-Served Weapons (Emphasis on Machine Guns) Inadequate individual and crew skills. Limited practice before qualification. Crew turbulence, lack of local ranges.	9.3
12.	MILES Lack of individual skills relative to operations and field maintenance. Limited evaluator/controller/umpire personnel.	11.1

Note: NCOs ranked the twelve training needs areas on a scale of 1-12 in terms of the importance of the needs to the Idaho RC with "1" representing the most important need. The average ranking is shown at right.

TABLE E-3

RANKING OF TRAINING NEEDS BASED ON
OFFICER LEADERSHIP INTERVIEWS

RANK	NEEDS	RATING
1.	Acquiring and maintaining individual skills	1.6
	---- Level 1 tasks	
	---- Junior Officer/NCO skills	
2.	Implementation of collective training	1.7
	---- Tactical training vs crew served weapons tng	
	---- Training management	
	---- Wasted training time	
	---- Selection of goals and objectives	
	---- Training priorities	
	---- MILES expertise	
3.	Higher headquarters (TRADOC/FORSCOM) guidance	2.2
	---- Conflicting/confusing	
	---- Consolidate/simplify/standardize	
	---- Two many requirements	
	---- Too much decentralization	
4.	Equipment condition	2.3
	---- Vehicle/weapon maintenance	
	---- Communications	

Note: 1. The rating is based on the average of three ratings:

--importance of solving the problem in Idaho
--the cost in dollars
--the probability of success

The original ratings were made on a three point scale (1,2,3), with "1" being favorable (high importance, low cost, and high probability of success).

TABLE E-4
SOLUTIONS FROM SENIOR NCO LEADERSHIP INTERVIEWS

PROBLEM	SOLUTION	SUM	VALUE	COST	PROB/ SCCSS
1. Individual skill sustainment	a. Use State schools b. Use unit schools c. On the job tng d. Use AC schools e. Use USAR schools	5.2 5.3 5.5 5.7 6.7	1.3 1.8 1.8 1.3 2.5	2.5 1.7 1.5 3.0 1.8	1.3 1.8 2.2 1.3 2.3
2. Junior Officer/ NCO supervision and skills	a. Hold leadership accountable for results through programs of reward recognition and counseling b. Emphasize Leadership development programs. c. Require OBC/NCO qualification and AC tour before assignment to a duty position. Have extra duty positions for all others.	4.2 4.4 5.2	1.2 1.0 1.0	1.6 2.0 3.0	1.6 1.4 1.2
3. Training Mgt	a. Fewer tasks done to standard and fewer requirements. b. Eliminate changes to plans and schedules. c. Identify all MOS tasks relevant to each ARTEP mission. d. TRADOC define minimum tasks for each MOS.	3.4 4.0 4.0 4.2	1.0 1.0 1.2 1.0	1.0 1.0 1.4 1.8	1.4 2.0 1.4 1.4
4. Wasted Tng Time	a. Conduct split drills by sub-unit (squad/section/platoon) with NCO responsibility for training. b. Reduce administrative distractors such as paperwork and other non-training requirements. c. Conduct one admin UTA/quarter for inspections, PT, etc. in addition to regular drill schedule.	3.8 4.3 5.0	1.2 1.3 1.5	1.2 1.2 2.0	1.5 1.8 1.5
5. Training Obs	a. Emphasize individual training first-then go to unit training. b. Reduce the number of training objectives. c. Design and use a computerized training schedule.	3.7 4.0 4.2	1.2 1.3 1.0	1.0 1.0 1.8	1.5 1.7 1.4
6. Maintenance of	a. Eliminate OMSs and redistribute Equip/Vehicles/personnel back to the units. b. Institute a system of spot checks	3.7	1.2	1.0	1.5

	and job aids for individual and crew maintenance tasks.	4.2	1.3	1.5	1.3
	c. Expand COMET visits to evaluation of individual maintenance perfor.	4.8	1.5	1.5	1.8
	d. Assign MATES equipment for use by unit of assignment only. Others use a common equipment pool.	5.7	1.5	1.5	1.8
7.Tactical Tng	a. Limit all external ARTEP external evaluations to platoon level.	3.6	1.2	1.2	1.2
	b. Mandate counterpart training with the AC for all leaders. Institute an AC/RC exchange program for units and individuals.	5.0	1.0	2.3	1.7
	c. Establish permanent committees for ranges/weapons and tactical training. Assign to STARC/ARNG Installation or MUSARC/ARCOM.	5.2	1.0	2.7	1.5
8.19E/19D/12B Skills	a. Mandate use of simulators as part of an organized training program.	5.0	1.5	1.7	1.8
9. TRADOC/FORSCOM Guidance	a. Define minimum platoon tasks for each mission and minimum individual tasks for each MOS.	3.8	1.3	1.0	1.5
10. Communications	No solutions. Skills are highly degradeable and judged to be easily trained post-mob.				
11.Crew Served Weapons (Emphasis on MG)	a. Develop MILES targets for all weapons.	3.3	1.0	1.0	1.3
	b. Mandate annual qualification on tank tables 1-3 at home station	3.3	1.0	1.0	1.3
	c. Establish platoon tactical proficiency, using MILES, as a minimum standard.	3.7	1.3	1.3	1.0
	d. Drop tank tables 7/8. Fire crew/ individual familiarization, annually on moving/stationary targets from stationary tank.	4.7	1.0	1.3	2.3
12.MILES	a. Send MTTs to each armory to train all personnel on operations and maintenance.	4.4	1.4	1.8	1.2
	b. Create job aids for operation and maintenance of MILES.	4.4	1.4	1.2	1.8

Note: Suggestion value to Idaho RC/implementation cost/probability of success were rated on a three point scale(1,2,3). The "1" was always favorable (High value/probability of success and low cost). The ratings were added to produce the sum column. The best possible solution is "3" and the worst is "9".

TABLE E-5
SOLUTIONS FROM OFFICER LEADERSHIP INTERVIEWS

PROBLEM	SOLUTION	SUM	VALUE	COST	PROB OF SUCCESS
1.Acquiring and maintaining individual skills	a.Hold leadership accountable through rewards/recognition/ counseling. Orient on results and promote on ability. b.Mandate skill qualification outside of drill/AT. Use AC/ RC schools/home study/OJT.	4.3 6.3	1.3 1.9	1.6 2.7	1.4 1.8
2.Implementation of collective training	a.Fewer requirements. Emphasize fewer tasks done to standard. b.Emphasize individual training. Train individuals first then small units. c.Limit all external ARTEP evaluations to platoon level. d.Establish permanent range/ weapon/tactical committees. Assign to STARC/ARNG instal/ MUSARC/ARCOM.	3.9 5.0 5.6 5.6	1.3 1.8 2.3 1.6	1.2 1.4 1.2 2.7	1.3 1.8 2.0 1.3
	e.Conduct one admin UTA/quarter for inspections,PT, common subjects, paperwork, etc. f.Establish, as a goal, platoon tactical proficiency, using MILES. g.Provide MILES MTTs to each armory, to develop MILES capability in units. h.Schedule split drills by crew/ squad/section/platoon with NCO responsibility for conduct of training.	5.9 6.5 6.9 7.1	2.0 2.1 2.4 2.3	2.0 2.4 2.3 2.3	1.9 2.0 2.3 2.4
3.Higher HQs (TRADOC/FORSCOM) guidance	a.Publish ARTEPS which define minimum platoon drills for each unit mission. b.Define all MOS tasks which support ARTEP missions.	5.7 5.9	1.6 1.8	2.1 2.1	2.0 2.0
4.Equipment condition	a.Institute a system of spot checks and job aids for crew/ individual maintenance.	5.6	1.8	1.8	2.0

Note: Suggestion value to Idaho RC units, cost of implementing the solution, and probability of success were rated by participants on a three-point scale (1,2,3.). A rating of "1" was always favorable (high value/probability of success/low cost).

APPENDIX F

TRAINING QUALITY VERSUS QUANTITY

Training Quality Versus Quantity

An issue of quality versus quantity was raised in the Senior Leadership Interviews in response to, "What is to be trained?" Leadership perceives that Company sized units tend to become a "dumping ground" for training requirements, including Soldiers Manual tasks that are not trained to standard in the school environment. For example, the Cavalry Scout MOS (19D) leaves a considerable number of tasks to be trained in the unit (See Table 1). In other words, it is easy for training requirements at this level to grow excessively long. One of the primary purposes of BTMS was to decentralize and prioritize training requirements based on wartime missions. However, in practice, BTMS can be implemented in ways that do not sufficiently prioritize training requirements for the company level commander. This is a problem that appears in some Idaho units. Given the restricted training time available, unit leaders, therefore, must choose between doing a few tasks well or many tasks poorly. Leaders in the Senior Leadership Interviews expressed a strong preference for doing a few tasks well, suggesting that fewer training requirements were in order (See Table E-5, Solution 2a; Table E-4, Solution 3a).

Doing a few tasks well allows for the possibility of excellence, but also involves the risk of leaving out important training. The issue seems to contrast two training models, the academic model and the athletic model. The academic model emphasizes familiarization in many areas, with the assumption that the student will pick up additional detail later in the real world of work. The athletic model involves competition between teams, with little time for additional fundamental training after the start of the season. Which football team would win--one that could execute 5 plays well or 15 plays poorly? While the goal is to execute all plays well, where does one start--with 5 well practiced plays or familiarization with 15 plays? Commanders do have some discretion on this issue. However, results from the Senior Leadership Interviews seemed to suggest that the most common state of affairs is for inadequate prioritization of training tasks. This produces, by default, the academic model, the risk of leaving anything out. Personnel in the Senior Leadership Interviews suggested a preference for a model like the athletic model that would allow them to do fewer tasks well, initially, adding tasks as time permitted, recognizing that some risk is involved in leaving some tasks out, temporarily.

It should be noted that here is a relationship between the issue of "quality versus quantity" and the training level. Under the guidance of the Total Force Policy, there is increasing

pressure for RC combat units to train at higher echelons. Since training time is limited, and training at higher echelons requires extensive preparation, effective training may only be possible by limiting the range of tasks that are trained at that higher echelon. This in turn, raises the question of increasing the risk of failure by leaving tasks out. Higher echelon tasks take longer to train, thereby reducing the number of times they can be repeated. This makes sustainment at all levels more difficult. Senior Leadership Interviewees seemed to feel that a better balance could be attained by focusing on a wider range of tasks at the small unit level than is possible to focus on at higher echelons. Doing so would contribute to sustainment of small unit skills.

These recommendations from the senior leaders strengthens the argument for expanding the use of high technology in officer training, such as, CAMMS and BABAS (e.g., computer assisted map manuevers and battalion battle simulation). These methods permit repeated and intensive exercise in combat manuever for officers and senior NCOs without requiring numerous enlisted soldiers to be involved just so officers can practice their skills.

APPENDIX G

A COMPARISON OF THE EFFECTIVENESS OF TWO TRAINING STRATEGIES:
ADVANCED INDIVIDUAL TRAINING (AIT) AND ACTIVE COMPONENT
SCHOOLS VERSUS SUPERVISED-ON-THE-JOB TRAINING (SOJT)

TABLE G-1

A COMPARISON OF TWO METHODS OF MOS QUALIFICATION ON ABILITY TO PERFORM A LEVEL 1 TASK IN MOS 12B, COMBAT ENGINEER

TASK	TASKS FAVORING AIT/AC SCHOOL 1		LEVEL TAUGHT QUAL INTRO	2
	HOW QUALIFIED AIT/AC	SOJT		
Identify components of a float bridge	3 64	4 42	X	
Identify components of a Bailey bridge	70	37	X	
Operate a pneumatic assault boat	73	42		X
Reeve simple tackle systems	75	61	X	
Tie knots and lashings	92	82	X	
Maintain and use demolition equipment	92	85	X	
Install anti tank mines	95	83	X	
TASKS FAVORING SOJT				
Assemble corrugated metal pipe for culverts	67	70		
Determine stream width and velocity	75	90		
Load and transport explosives	78	92		
Identify limiting slopes and curves	79	85		
Operate a generator	81	90		

Note: 1. Indicated percentages are only from soldiers who indicated they were MOS qualified. Table entries are percentages of soldiers who indicated they could do the task to standard.

2. Indicates if the task is taught to standard(Q) or introduced(I) in Basic/AIT. No mark indicates the task is neither taught nor introduced in Basic/AIT. Based on 1984 P01.

3. Percentage of soldiers who indicated MOS qualification by AIT/AC who said they could perform the task to standard.

4. Percentage of soldiers who indicated MOS qualification by SOJT who said they could perform the task to standard.

TABLE G-2

A COMPARISON OF TWO METHODS OF MOS QUALIFICATION ON ABILITY TO PERFORM A LEVEL 1 TASK IN MOS 19D, ARMORED CAVALRY SCOUT

TASK	TASKS FAVORING AIT/AC SCHOOL		LEVEL TAUGHT	2
	1	HOW QUALIFIED		
AIT/AC	SOJT			
Maintain/operate/engage targets with the TOW	3 21	4 5	X	
Maintain/operate/engage targets with the Dragon	29	10	X	
Maintain and operate night vision devices/infrared equip/blackout drive on an M113	60	47	X	
Drive and perform maintenance on an M113 tracked vehicle	76	51	X	
Emplace/install/locate/remove mines and booby traps	77	61	X	
Maintain/operate/engage targets with the cal.50 machine gun	84	60	X	
Maintain and use night vision goggles	89	67	X	
Maintain/operate/engage targets with the M60 machine gun	94	84	X	
Maintain/operate/engage targets with the M203 grenade launcher	97	84	X	
TASKS FAVORING SOJT				
Use an IM 174 radiacmeter	40	64	X	
Collect data for classification of a route	66	75	X	
Call for and adjust indirect fire	83	85	X	
Prepare/operate FM radio set	90	95	X	
Determine a location on the ground by terrain association	93	95	X	

Note: 1. Indicated percentages are only from soldiers who said they were MOS qualified. Table entries are percentages of soldiers who said they could perform the task to standard.

2. An X indicates if the task is taught to standard(Q) or introduced (I) in Basic/AIT. No X indicates the task is neither taught nor introduced in Basic/AIT. Based on 1985 P01.

3. Percentage of soldiers who indicated MOS qualification by Basic/AIT who also said they could perform the task to standard.

4. Percentage of soldiers who indicated MOS qualification by Basic/AIT who also said they could perform the task to standard.

TABLE G-3

A COMPARISON OF TWO METHODS OF MOS QUALIFICATION ON ABILITY TO PERFORM A LEVEL 1 TASK IN MOS 19E, ARMORED CREWMAN

TASK	TASKS FAVORING AIT/AC SCHOOL		1	2
	HOW QUALIFIED	LEVEL TAUGHT		
	AIT/AC	SOJT	QUAL	INTRO
Call for and adjust indirect fire	3 71	4 63		
Use flag signals	73	57	X	
Replace a thrown track	86	66		
Evacuate a wounded crewman	90	62		
Remove/install track blocks	90	71	X	
Use hand and arm signals	92	83	X	
Perform required checks and services on the tank engine/suspension/track	92	82	X	
Boresight the main gun	84	75	X	
Inspect/prepare/stow ammo.	97	84	X	
TASKS FAVORING SOJT				
Maintain/apply immediate action/reduce stoppages/fire the .45 cal submachinegun.	67	75	X	
Perform operators preventative maintenance checks and services and mount appropriate radios	82	89	X	

Note: 1. Indicated percentages are only from soldiers who said they were MOS qualified. Table entries are percentages of soldiers who said they could perform the task to standard.

2. Indicates if the task is taught to standard (Q) or introduced (I) in Basic/AIT. No mark indicates the task is neither taught nor introduced in Basic/AIT. Based on 1985 P01.

3. Percentage of soldiers who indicated MOS qualification by AIT/AC and who also said they could perform the task to standard.

4. Percentage of soldiers who indicated MOS qualification by SOJT and who also said they could perform the task to standard.

APPENDIX H

TASK PERFORMANCE RATINGS FOR MOSs 64C, 71L, AND 76Y

TABLE H-1

MOTOR TRANSPORT OPERATOR (84C)
(n=91)

CAN YOU PERFORM THIS TASK?	% NO	CAI
1. OPERATE VEHICLE WITH MANUAL TRANSMISSION	2.2	
2. OPERATE VEHICLE IN A CONVOY	3.3	
3. PARK VEHICLE PARALLEL	3.3	
4. OPERATE VEHICLE IN SNOW, ICE, SAND, AND OFF ROAD	4.4	
5. PERFORM OPERATOR/CREW PM CHECKS AND SERVICES	4.4	X
6. TRANSPORT GENERAL CARGO	4.5	
7. OPERATE VEHICLE WITH AUTOMATIC TRANSMISSION	6.7	
8. DRIVE VEHICLE UNDER BLACKOUT CONDITIONS	10.3	
9. USE PROPER DEFENSE PROCEDURES WHEN AMBUSHED OR ATTACKED	11.5	X
10. TRANSPORT PERSONNEL IN TRUCK OR BUS	13.6	
11. OPERATE VEHICLE WITH SEMI-AUTOMATIC TRANSMISSION	16.7	
12. OPERATE VEHICLE WITH PINTLE-CONNECTED TRAILER	16.7	
13. PERFORM VEHICLE SELF RECOVERY USING WINCH	23.6	
14. FILL OUT SF91, OPERATORS REPORT OF MOTOR VEHICLE ACCIDENT	25.6	X
15. TRANSPORT DANGEROUS AND HAZARDOUS CARGO	27.3	
16. FILL OUT DD FORM 518, ACCIDENT IDENTIFICATION CARD	27.5	X
17. COUPLE/UNCOUPLE SEMI-TRAILER	27.8	
18. OPERATE TRACTOR AND SEMI-TRAILER	27.8	
19. PREPARE VEHICLE FOR MOVEMENT/SHIPMENT	27.9	
20. PROCESS VEHICLE COMMITMENT ORDER	54.5	X

NOTE: AN X IN THE CAI COLUMN INDICATES THE TASK COULD BE TAUGHT USING COMPUTER ASSISTED INSTRUCTION (i.e. VIDEO DISC/GRAFICS).

TABLE H-2
ADMINISTRATIVE SPECIALIST (71L)
(n=56)

CAN YOU PERFORM THIS TASK?	% NO	CAI
1. TYPE A NON MILITARY LETTER	5.4	X
2. UNDERSTAND AND USE ARMY AND NATIONAL GUARD REGS.	5.4	
3. TYPE A BASIC COMMENT TO A DF	7.5	X
4. FILE DOCUMENTS AND CORRESPONDENCE	8.9	
5. TYPE STRAIGHT COPY MATERIAL	8.9	X
6. TYPE A MEMORANDUM	8.9	X
7. TYPE A MILITARY LETTER	10.7	X
8. ESTABLISH FUNCTIONAL FILES	12.5	X
9. POST REGULATIONS AND DIRECTIVES	12.5	
10. TYPE AN ENDORSEMENT TO A MILITARY LETTER	12.5	X
11. ROUTE INCOMING DISTRIBUTION	16.1	
12. ASSEMBLE CORRESPONDENCE	17.9	
13. DISPATCH OUTGOING DISTRIBUTION	21.4	
14. TYPE A JOINT MESSAGE FORM	28.6	X
15. SAFEGUARD CLASSIFIED MATERIAL	29.1	X
16. TYPE MILITARY ORDERS	30.4	X
17. CONDUCT ADMINISTRATIVE RESEARCH	32.1	
18. PROCESS OFFICIAL ACCOUNTABLE MAIL	39.3	
19. RECEIVE AND TRANSFER CLASSIFIED MATERIAL	42.6	
20. PREPARE A REQUISITION FOR PUBLICATIONS USING AUTODIN	42.9	X

NOTE: AN X IN THE CAI COLUMN INDICATES THE TASK COULD BE TAUGHT USING COMPUTER ASSISTED INSTRUCTION (I.e. VIDEO DISC/GRAPHICS).

TABLE H-3

UNIT SUPPLY SPECIALIST (78Y)
(n=54)

CAN YOU PERFORM THIS TASK?	% NO	CAI
1. ISSUE SUPPLIES AND EQUIPMENT TO HAND RECEIPT HOLDERS	9.8	
2. STORE SUPPLIES AND EQUIPMENT IN UNIT STORAGE AREAS	13.1	
3. TURN IN SUPPLIES AND EQUIPMENT	13.1	
4. ORDER SUPPLIES AND EQUIPMENT	14.8	X
5. PERFORM PREVENTIVE MAINTENANCE ON ASSIGNED WEAPONS	16.7	
6. PITCH A GENERAL PURPOSE MEDIUM TENT	17.2	
7. PREPARE AND MAINTAIN HAND/SUB HAND RECEIPT FILES	18.0	X
8. PREPARE AND MAINTAIN ORG. CLOTHING/EQUIPMENT RECORD	18.0	X
9. RECEIVE SUPPLIES AND EQUIPMENT	18.0	
10. PREPARE AND MAINTAIN A DOCUMENT REGISTER	19.7	X
11. ISSUE AND RECEIVE WEAPONS	21.7	
12. PREPARE AND PROCESS PERSONAL CLOTHING REQUEST	23.3	X
13. CONTROL WEAPONS AND AMMUNITION IN SECURITY AREAS	24.6	
14. UPDATE SIGNATURE CARDS	26.2	X
15. TRANSFER SUPPLIES AND EQUIPMENT	30.0	
16. MAINTAIN DUE IN STATUS FILE FOR REQUESTED ITEMS	31.1	X
17. REQUEST CANCELLATION OF SUPPLIES	31.7	X
18. MAINTAIN KEY CONTROL REGISTER FOR WEAPONS STORAGE AREAS	32.8	X
19. REQUEST SUPPLY STATUS FOR HIGH PRIORITY REQUESTS	36.1	X
20. PROCESS PERSONAL AND ORGANIZATIONAL LAUNDRY	45.0	

NOTE: AN X IN THE CAI COLUMN INDICATES THE TASK COULD BE TAUGHT USING COMPUTER ASSISTED INSTRUCTION (i.e. VIDEO DISC/GRAPHICS).

APPENDIX I

SUMMARY OF INTERVIEW RESPONSES FOR MOSS 12B, 19D, AND 19E

TABLE I-1
SUMMARY OF INTERVIEW RESPONSES
COMBAT ENGINEER (12B)

TASK

1. Identify components of a float bridge
2. Identify components of a Bailey bridge
3. Operate a pneumatic assault boat
4. Investigate and clear demolition misfires
5. Reeve a simple tackle system
6. Assemble corrugated metal pipe for culverts
7. Place breaching charges

RESPONSES

Number interviewed: 54
Median rank : E4

Average RC Service: 4.1 years
Average time in DMOS: 2.8 years

TASK	PERCENT WHO NEVER PERF.	NO. TIMES PERF.		LAST TIME PERF.	
		Range	Median	Range	Median
1	35	1-2	1	5/66-7/86	4/82
2	33	1-3	1	1/70-4/86	4/83
3	28	1-5	1	1/76-8/86	7/86
4	41	1-20	2	8/81-8/86	6/84
5	41	1-6	1	4/81-7/86	4/85
6	78	1-2	1	5/80-12/85	1/82
7	43	1-5	1	5/80-8/86	8/85

TASK	PERCENT WHO FELT TASK WAS NOT		PERCENT WHO FELT TASK HAD INADEQUATE	
	Useful	Critical	Equip	Tng Areas
1	31	46	74	30
2	30	50	67	30
3	19	43	28	19
4	9	24	20	13
5	11	24	22	13
6	20	30	35	19
7	7	20	19	13

CLASSIFICATIONS OF REASONS FOR PERFORMANCE DEFICITS

TASK	PROBLEM IS SKILLS/KNOWLEDGE		PROBLEM IS ENVIRONMENT		TASK IS TRAINED IN BASIC/AIT	
	Learn	Maintain	Eqpt	Tng Area	Q*	I**
1	X	X	X	X	X	
2	X	X	X	X	X	
3	X	X				X
4	X					
5	X					X
6	X		X	X		
7	X					

Note: * Taught to qualification standards
** Introduced only

TABLE 1-2
SUMMARY OF INTERVIEW RESPONSES
CAVALRY SCOUT (19D)

TASKS

1. Maintain, operate, and engage targets with the TOW
2. Maintain and operate night vision devices, infrared equipment, and blackout drive on an M113 tracked vehicle
3. Use an IM 174 Readiacmeter (a common task)
4. Employ and install mines and booby traps
5. Drive and perform maintenance on an M113 tracked vehicle
6. Collect data for classification of a route
7. Construct and install electrical demolition systems

RESPONSES

Number interviewed: 39
Median rank : E4-E5

Average RC Service: 5.6 years
Average time in DMOS: 3.7 years

TASK	PERCENT WHO NEVER PERF.	NO. TIMES PERF.		LAST TIME PERF.	
		Range	Median	Range	Median
*1	*	*	*	*	*
2	15	1-12	4	5/82-7/86	6/85
3	26	1-36	3	6/83-7/86	11/85
4	8	1-36	3	1/81-6/86	6/86
5	5	3-90	30	3/83-7/86	7/86
6	15	1-30	6	5/71-7/86	6/85
7	39	1-25	3	5/71-7/86	6/85

TASK	PERCENT WHO FELT TASK WAS NOT		PERCENT WHO FELT TASK HAD INADEQUATE	
	Useful	Critical	Equip	Tng Areas
*1	*	*	*	*
2	0	3	3	0
3	3	3	3	3
4	3	3	15	10
5	0	0	0	0
6	0	3	0	0
7	0	10	18	

CLASSIFICATION OF REASONS FOR PERFORMANCE DEFICITS

TASK	PROBLEM IS SKILLS/KNOWLEDGE		PROBLEM IS ENVIRONMENT		TASK IS TRAINED IN BASIC/AIT Q** I***
	Learn	Maintain	Eqpt	Tng Area	
1		X			X
2		X			X
3	X	X			X
4		X	X		X
5		X			X
6		X			X
7	X	X	X	X	

Note: * TOW New Equip. Training (NET) given by Ft Knox at AT 86 to IDARNG
** Taught to qualification standards
*** Introduced only

TABLE I-3
SUMMARY OF INTERVIEW RESPONSES
TANK CREWMAN (19E)

TASKS

1. Troubleshoot the fire control system.
2. Use flag signals.
3. Call for and adjust fire.
4. Replace a thrown track.
5. Engage targets from the gunners station.
6. Boresight and fire the coaxial machine gun.
7. Remove and install track blocks.

RESPONSES

Number interviewed: 46 Avg ARNG Service: 4.8 years
Median Rank : E5 Avg time in DMOS: 3.6 years

TASK	PERCENT WHO NEVER PERFORMED	NO. TIMES PERFORMED		LAST TIME PERFORMED	
		Range	Median	Range	Median
1	13	1-30	3	1/83-7/86	2/86
2	29	1-15	4	1/84-7/86	2/86
3	26	1-12	2	4/83-7/86	6/85
4	16	1-10	2	8/74-2/86	7/84
5	18	1-20	3	8/75-7/86	6/85
6	23	1-14	3	7/80-7/86	6/85
7	25	1-12	1	8/75-7/86	8/84

TASK	PERCENT WHO FELT TASK WAS NOT useful critical		PERCENT WHO FELT TASK HAD INADEQUATE Equip Tng areas	
	useful	critical	Equip	Tng areas
1	2	13	11	7
2	4	20	2	2
3	2	13	22	15
4	0	20	13	11
5	0	7	9	15
6	0	11	15	26
7	0	26	11	11

CLASSIFICATION OF REASONS FOR PERFORMANCE DEFICITS

TASK	PROBLEM IS SKILLS/KNOWLEDGE		PROBLEM IS ENVIRONMENT		TASK IS TRAINED IN Basic/AIT	
	Learn	Maintain	Eqpt	Tng Area	Q*	I**
1		X				X
2	X	X				X
3	X	X	X	X		
4		X				
5		X				X
6	X	X	X	X		X
7	X	X			X	

Note: *Taught to qualification standards

**Introduced only

APPENDIX J

ABBREVIATIONS AND ACRONYMS

APPENDIX J

ABBREVIATIONS AND ACRONYMS

12B	Combat Engineer
19D	Cavalry Scout
19E	Armored Crewman
64C	Motor Transport Operator
71L	Administrative Specialist
76Y	Unit Supply Specialist
AC	Active Component
ACR	Armored Cavalry Regiment
AGR	Active Guard/Reserve
AIT	Advanced Individual Training
ANCOC	Advanced Non-commissioned Officer Course
ARCOM	Army Reserve Command
ARI	Army Research Institute
ARNG	Army National Guard
ARTEP	Army Training and Evaluation Program
AT	Annual Training
BCT	Basic Combat Training
BTMS	Battalion Training Management System
CAI	Computer Assisted Instruction
CATF	Combined Arms Training Facility
CDRS	Commanders
COFT	Conduct of Fire Trainer
COMET	Command Organizational Maintenance Evaluation Team
DCST	Deputy Chief of Staff for Training
DD	Defense Department
DF	Disposition Form
DMOS	Duty Military Occupational Specialty
DSSI	Duty Specialty Skill Indicator
e.g.	exempli gratia, for example
EIDS	Electronic Information Delivery System
EM	Enlisted Man
EOAC	Engineer Officer Advance Course
ETS	End Term of Service
FC	Field Circular
FM	Field Manual
FORSCOM	Forces Command
Ft	Fort
FTX	Field Training Exercises
FY	Fiscal Year
HQ	Headquarters
i.e.	id est, that is
ID	Idaho
IDARNG	Idaho Army National Guard
IDT	Inactive Duty Training
IET	Initial Entry Training
IRR	Individual Ready Reserve
ISD	Instructional Systems Development
ITEP	Individual Training Evaluation Program
LTA	Local Training Area

MATES	Maintenance and Training Equipment Site
METL	Mission Essential Task List
MG	Machine Gun
MILES	Multiple Integrated Laser Engagement System
MOS	Military Occupational Specialty
MOSQ	Military Occupational Specialty Qualification
MTA	Major Training Area
MTT	Mobile Training Team
MUSARC	Major United States Army Reserve Command
NA	Not Applicable
NBC	Nuclear, Biological, and Chemical
NCO	Non-commissioned Officer
NGB	National Guard Bureau
NTC	National Training Center
OBC	Officer Basic Course
OJT	On-the-job Training
OMS	Organizational Maintenance Shop
OSUT	One Station Unit Training
POI	Program of Instruction
PT	Physical Training
RC	Reserve Component
RDBMS	Relational Data Base Management System
S & S	Supply and Service
SOJT	Supervised On-the-job Training
STARC	State Area Command
STRAC	Standards in Weapons Training
TASC	Training Aids Support Center
TDA	Table of Distribution and Allowances
TGMENTS	Tank Gunnery Missile Tracking System
TM	Training Manual
TOE	Table of Organization and Equipment
TOW	Tube-launched, Optical-sited, Wire-guided, Missile
TRADOC	Training and Doctrine Command
TSFO	Target Simulator Forward Observer
TTA	Training Technology Agency
TTFA	Training Technology Field Activity
US	United States
USAR	United States Army Reserve
USARF	United States Army Reserve Forces
UTA	Unit Training Assemblies
VCR	Video Cassette Recorder